INTN'L MONTHLY MAGAZINE-BY AND FOR ACTIVE RADIOAMATEURS

RADIOSPORTING

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BEAUTIFY YOUR NEIGHBORHOOD -

PUT UP A QUAD!

1985 CAN-AM
CONTEST RESULTS

Yuri Blanarovich, VE3BMV

The 1985 CAN-AM contest was actually only half of the contest. Probably for the first time in the history of contesting, the phone portion of the contest was canceled due to the Mexican earthquake. Just a few hours before the contest I received a phone call from Harry, VE3GRO, who, just before that, had a phone call from a California amateur, suggesting that the CAN-AM phone contest be canceled. The bands were busy with emergency traffic and the contest might have interfered with the traffic. VE3GRO and I quickly agreed that contest should be canceled. Harry then phoned Dave Sumner, K1ZZ, who also agreed with the cancellation and spread the news about this decision on the W1AW bulletin. Other contesters were already on the band as begining of the contest was approaching and notified others about the cancellation. The bands were available for emergency traffic to and from Mexico City. Many contesters participated in the traffic handling. Thanks to all would be participants for understanding. The phone trophy should go to all those who helped to save lives and pass messages during this disaster.

The CW portion of the CAN-AM proceeded as planned. There was still traffic handling going on, but mostly on phone. The CW portions of the bands were relatively quiet, no problems with interference.

For this reason, we do not have this year's combined winners for phone and CW competition, just CW. The CW winners can consider themselves as overall winners.

The propagation was not very good. Many contesters did not see the previous year's results on time (published late in QST), even though we recorded a modest increase in the logs from US.

The absolute winner from USA is Jeff Bolda, WC4E, who gets the American Trophy sponsored by the CRRL. Jeff just edged out KBØG by having two more multipliers. N6OP came in third.

The absolute winner from Canada, and the station with highest score in the contest is Doug Freestone, VE5UF, who managed to work 579 contacts. Doug receives the Canadian Trophy sponsored by the ARRL. The second place goes to Andy, VE1ASJ, and third place to Ken, VE3KP.

The American Champion Trophy sponsored by the International Radiosport Association in the multioperator category goes to AI9X/AA5B team, who edged out WAØQIT and NN3SI.

The Canadian Champion Trophy sponsored by the Albuquerque DX Association goes to the VE6CSE team.

We hope that the publicity for CAN-AM will improve with the help of CRRL through the QST. *RADIOSPORTING* magazine will also give it a full coverage.

Many participants like the incentive rules thus, we hope that the CAN-AM popularity will grow. It will be an excellent alternative for those who operated the ARRL CD QSO party.

The certificates and trophies should go out shortly. The 1986 run of the CAN-AM contest will be on the third weekend of September with some minor changes.

Random comments:

VE3AXV:I believe that it was a wise decision to cancel the phone portion of the contest due to the Mexican earthquake. Even the most avid contester understands that emergency communication must take priority over all other amateur activities.

VE3CWE: Good contest! Very slow starting on 40 and 80 m, but busy later. Nice to work KBØG on 5 bands.

VE1ASJ: Suggest stations watch 160 m band on the hour. If DX counted, I could have had a real big score especially on 80 m.

VE6CSE: Our first contest, we had fun. Worked all stations with 50 W out and Hy-gain vertical antenna.

VE7AV: Poor conditions, but still fun!

NN3SI: DC is a state level jurisdiction and should be counted as a separate multiplier! Good contest!

NOFMR: This was my first CAN-AM and I had a ball. You can be sure I'll be back next year.

KF6A: Conditions not very good, but as usual, had fun. Lots of VEs this year.

WB7APW: Where were the big guns on 15 meters? Heard nothing but noise and DX stations. What I liked about this contest was that everyone seemed to take the time to dig out the QRP stations.

N7HJM: Thanks for a good contest. Nice to hear lots of activity. As usual, I did not have as much time to participate as I would like, but had fun "dabbling." Will look forward to next year's event.

W6JTI: I think output power should be indicated in results, as in Sweepstakes.

W5NR: Better than last time, but still need many more participants to get back to real good parties. Only a few very active VEs on CW.

W7TC: As usual, a great contest.

WC4E: This contest was fun, knowing I wasn't 500 QSOs behind K6LL!

W5ASP: Activity down from '84. Interest will cease unless results are made available to contestants.

N6OP: The CD Party people are looking for a new substitute. You might want to try stirring them up, perhaps with League's support. Good contest format. The only thing I would change is to drop the RST. The QSO number is a real test.

KY5N: Rough going with only 100 W and vertical. Missed many multipliers.

WBOSYV: Nice contest! Some stations have very broad signals, but most operators very A1! Had 6" of snow at our QTH over contest weekend. Most snow ever for this late.

KK7C: Propagation was marginal much of the time and participation was light. We could not operate during the day so we were not able to benefit from 20 meter openings.

W4WKQ: Poor conditions, 10 and 15 m bands were dead, 80 and 160 had static.

NOCLV: My best score yet. Too bad about the SSB portion being canceled. I am planning to have a beam next year.

Multioperator stations operated by: AI9X (+AA5B); WAOQIT (NOEOB); NN3SI (W4KM); VE6CSE (+VE6CSF); VE4QST (VE4MG)

The columns are listed in the following order: Place, Callsign, Multiplier area, Category (single operator: A - all band, Q - QRP, # - indicates single band frequency, M - multioperator), Final Score, Number of QSOs, Multipliers.

1985 CAN-AM CW RESULTS

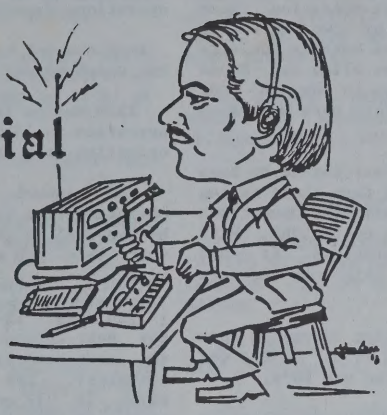
AMERICANS

1	WC4E	FL	A	*	163380	538	140
2	KBØG	KS	A	*	161322	539	138
3	N6OP	CA	A	*	152684	533	133
4	K5NW	TX	A	*	94164	380	114
5	W5ASP	TX	A	*	92803	415	103
6	W6JTI	CA	A		71894	323	103
7	NA9J	IL	A	*	68579	328	97
8	N7CIX	AZ	A	*	64100	296	100
9	WA7EGA	WA	A	*	63360	307	96
10	KN5H	TX	A		56682	282	94
11	W7FGT	AZ	A		49640	269	85
12	AI9X	NM	M	*	45936	239	87
13	K9LJN	IL	A		44979	239	87
14	NØAQN	TX	A		30879	192	73
15	KF6A	CA	A		28240	152	80
16	W7TC	OR	A	*	26950	177	70
17	WAØQIT	MN	M	*	26845	211	59
18	K8MR	OH	A	*	25912	168	79
19	WBØSYV	NE	A	*	23872	172	64
20	N1CC	CT	A	*	22720	166	64
21	W5PWG	TX	A		22490	149	65
22	W4WKQ	FL	A		22445	147	67
23	WØIZV	CO	A	*	21038	140	67
24	NM7M	WA	Q	*	19278	143	63
25	WB7APW	AZ	Q	*	17460	133	60
26	WS4E	FL	A		16005	139	55
27	K2SX	NY	7	*	14400	147	45
28	NØFMR	KS	A		13098	102	59
29	KW2J	NY	A	*	11376	110	48
30	N7HJM	ID	A	*	11128	102	52
31	N2CQ	NJ	A	*	10293	100	47
32	K7FD	OR	7	*	9792	138	34
33	NØFFZ	CO	A		9450	91	45
34	KU7Y	ID	7	*	9310	125	35
35	WA2LBT	NJ	A		9200	93	46
36	W5NR	TX	A		9000	79	50
37	KØERM	SD	A	*	8820	88	45
38	K4BAM	VA	A	*	7144	83	38
39	KA7FEF	OR	A		7056	74	42
40	W5EIJ	AR	A	*	7009	70	43
41	K6XO	CA	Q	*	6578	76	46
42	W9OA	IL	Q	*	6160	70	40
43	W4XD	VA	Q	*	5360	59	40
44	KD2HE	NY	A		4964	74	34
45	AC8W	MI	A	*	4699	60	37
46	NØCLV	KS	14	*	4186	81	23
47	WDOGVY	IA	A	*	3999	58	31
48	K5DP	OK	A	*	3744	50	32
49	W2NRD	NY	A		3016	48	29
50	WA8LKU	AZ	A		2997	48	27
51	K6ZH	CA	Q		2987	42	29
52	W1CNU	CT	A		2916	51	27
53	W2JEK	NJ	Q	*	2652	45	26
54	N3CZB	PA	A	*	1640	37	20
55	KK7C	UT	Q	*	1600	42	20
56	W8EAO	OH	Q	*	992	28	16
57	AA6EE	CA	7	*	546	20	13
58	KB4KEM	VA	Q		407	17	11
59	KF4AV	KY	14	*	264	11	11
60	NN3SI	MD	M	*	105	7	7

CANADIANS

1	VE5UF	SK	A	*	207645	579	127
2	VE1ASJ	NB	A	*	187964	476	137
3	VE3KP	ON	A	*	121776	361	118
4	VE7QO	BC	A	*	69375	319	75
5	VE3CWE	ON	A	*	55742	210	94
6	VE3AXV	ON	A		37133	190	71
7	VO1QU	NF	14	*	30756	246	44
8	VE6ADK	AT	A	*	24475	156	55
9	VE3NBE	ON	A		18126	112	57
10	VE7DVV	BC	A		13923	95	51
11	VE7SK	BC	3.5	*	10512	103	36
12	VE6CSE	AT	M	*	9954	82	42
13	VE7AV	BC	3.5	*	8576	96	32
14	VE3OMU	ON	A		8015	81	35
15	VE2RO	PQ	A	*	6545	65	35
16	VE4QST	MB	M	*	3750	53	25
17	VE6BND	AT	14	*	2600	46	20
18	VE3BMV	ON	14	*	2100	29	25
19	VE3NYT	ON	14		1380	32	15
20	VE2AEJ/3	ON	Q	*	700	24	10

ve3bmv Radiotorial



We are still sliding down on the sunspot curve. This means that higher bands are closed for business for most of the time. Occasional openings in the North - South direction are still there and provide a bonanza for those from the southern hemisphere during the contest weekend. Activity has shifted to our lower bands, especially during the night time. From forty meters down to 160, the bands are buzzing with activity. Now is a good chance to improve your DXCC, DXCA standings, add a few new ones.

Our new DXCA award provides an incentive to start DX chasing all over again beginning with Jan. 1, 1986. Go after single band scores (including WARC bands) or start building the base for multi band DXCA - 6 band and up. We emphasize and encourage you to stay away from lists and net operations. Do your own DXing and you will enjoy it more. When you nail that rare one, it will feel like you have accomplished something special. Some might feel good after shooting the tiger in the ZOO, but many consider this a twisted logic. Even if you have worked them on the list in the past ("others do it"), try doing it on your own. You will feel more satisfaction and our hobby will be better.

When someone gets serious about competitive sports, be it contesting or serious DXing, he has to build a minimum base - equipment and skills. The equipment base can be compared to a races. A bicycle will have hard time beating a motorcycle or a racing car. The bicycle rider could still beat the motorcyclist, if he does not know how to start his bike. Two riders with comparable skills, one on the bicycle and one on the motorcycle, will demonstrate that the better machine sure helps to win the race.

We can also have the same situation when two riders on motorcycles produce different results. Quite often the rider with the latest machine could be outdone by the rider with seemingly inferior or older machine. The difference is that the second rider is using his brain, experience and skills to improve his machine, eventually making it better than that sparkling new commercial beauty.

This also applies to our radio sport. Those contesters and DXers, using their brains and making the best out of available resources, usually outdo the "appliance operators." There is more to contesting than just fast talking and twisting the knobs. Those who learn about the electronics and communications also know how to get that extra point out of it. Those who play with antennas, make their own, and observe their performance under different conditions can often work the stuff that other mortals can't even hear.

The areas that are still open for experimentation and improvement are: antenna design, propagation knowledge, application of computers to operate the station and modifications to the existing radio equipment.

Knowing from my own experience and talking to other contesters, the success in winning the contest doesn't come by accident. It requires years of learning, observation and hard work behind that number one listing in the results. In some case there were discoveries made that do not jive with the "bibles" of radio. Revealing those secrets will help others become more efficient. We might have more stations and multipliers to work. Explorers and authors of those discoveries will be immortalized and have infinite thanks from the rest of us. The next time that rare station will hear you in the contest, he will not just pass you by, he will give you a call and a precious point.

Take a minute or two to write down your experience or findings and share it with the rest of us. You will earn respect for yourself and our hobby. You don't have to be a pro - writer. We are focusing on practical ideas rather than the art of writing. We are just amateurs who enjoy fooling around with gadgets and exploring. If you have an idea or an interesting experience drop us line. We will have them out fast, for others to share. We will give you a one year free subscription to *RADIOSPORTING* for a decent size article.

We continue with our coverage of low band operating and technical articles. One thing is really becoming clear: the performance of vertical (or low angle radiator) antennas with decent ground system for DXing is superior to horizontal antennas. Even shorter verticals run circles around horizontal dipoles and loops at 100 feet, when using them on 160 m. Playing around with small loops, beverages and "weird" wire receiving antennas can lift the blanket of noise that is covering all kinds of rare signals. Nowadays you can work over 100 countries on 160 m over a one year period. In a city environment, the best time for 160 m DXing is after midnight, when most noisy appliances are off. Don't forget the contests, which are the best time to work many rare countries within a minimum of time. I heard 4U1UN in the recent contests begging for contacts. Is anyone still missing this one?

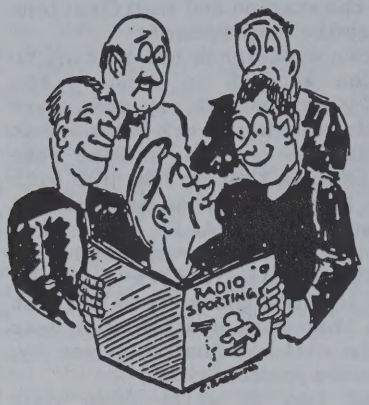
Dayton is coming! Many DX operators will find the current strength of the U.S. dollar an obstacle. Those who did not participate in this world's largest ham radio gathering are missing a lot. A huge flea market, commercial exhibits, discount deals on equipment, hospitality suites and a variety of forums will keep everyone busy for three days. It is an experience that every ham should have. Visit the Hamvention at least once in your radio life time. *RADIOSPORTING* will be there and we are looking forward to meeting many of you in our booth.

Our next issue should have the long awaited "face lift" with proportional spacing and a larger typeface. Also, the graphics will be improved to make it easier to read and more interesting to you, our readers. Keep your letters, articles and ideas coming. We want to be the mirror of our activity.

I hope you will have fun in the remaining contests of this spring season. May the propagation be with you. See you all in the 80 m pileups!

73, Yuri

DX NEWS



ART HUBERT, N2AU

The DX news from around the world as exchanged on the IRSA net and from other sources: Frankford Radio Club, Kansas City DX Club Newsletter, NCDXC CW Bulletin, South California DX Bulletin, Westlink Report, CRRL News, Worldradio, DJ9ZB, VE3BMV, KA2AJT, KE2C, WB4FNH, N4JF, PY7XC, VE3FRA, KI4PL, N4DUG, KB4IT, WB2DIN, ND2G, WA4SVO, VE3LZS, AB5A, NJ5X, W8AH, KE4SK, HH7PV, WA6AHF, K9AJ, KS0M, NF5Z, W6QL, NN5N, ZL1AMO, J37AH, VE3HO, VE3HGN, W6OMR, VE3LGC, 5H3BH, G4DYO, DX Inc., QRZ DX, W2IYX, QST, CQ Magazine, ZS6USA and INSIDE DX. Also, special thanks to Don Search, W3AZD, who confirmed the operations listed in the column.
The IRSA net operates on Sundays around 14.200 MHz, starting at 2000 Z and 3.830 (or nightly on 3.784 MHz at 0000 - 0200Z).

MOST WANTED COUNTRIES

PA0GAM, editor of DXPRESS published his Most Wanted List which is based on input from DXers around the world. Total amount of entries were 525. I am listing the top 15 only:

RANK	MIXED MODE	ENTRIES	CW	ENTRIES
1	3Y	524	ZA	178
2	7O	507	YA	169
3	VU5 and.	470	7O	164
4	XV	432	VU5 and.	162
5	XZ	429	1S	158
6	YA	419	3Y	149
7	5A	372	XV	136
8	ZA	367	VP8 ss.	135
9	4W	357	5A	132
10	1S	339	ZS2M	121
11	VP8 ss.	338	VP8 sg.	119
12	VP8 sg.	321	XZ	118
13	S2	321	4W	118
14	XW	306	3C0	118
15	SY	305	S2	117

There are several countries in the top 15 which surprise me. In mixed mode, 1S and SY, CW - 1S. I would have thought 60 would have made the listing, in fact, it was not in the top 25. Let us take a look at the top 15 in the mixed mode.

3Y Bouvet - The last operation there was in the late 70's by two Norwegian stations. They worked Russian Roulette style; you called them blind and hoped they would come back to you on your frequency. Very few DXers were worked on that operation.

7O South Yemen - There has never been a legitimate operation form there using the 7O prefix. Last accepted operations were the VS9A stations up to 1969. With the recent political problems, it could be sometime before this one becomes active.

VU5 Andamans - The last operation form here was in the early 70's. VU2DIA was very active on CW in the mid 60's.

XV Viet Nam - XV operations ceased in 1975 when the U.S. military withdrew from Viet Nam. Active stations were XV5AA, AB, AC and CQ; not a lot of CW activity. I believe this one could be activated in the next several years.

XZ Burma - Last accepted operation from here in the early 60's by Don Miller. At this time, amateur radio is prohibited in Burma. (Better to say: official permission is not issued by the central Burmese government. Ther were and are stations active from the Burmeese territory, but ARRL does not "recognize" them. VE3BMV)

YA Afghanistan - Activity from this one ceased in the early to mid 70's. With the political situation there, it will be some time before this one is active again.

5A Libya - Last accepted operation was K5CO/5A in 1978-79. Up until recently, this one could have been activated.

ZA Albania - Last accepted operation from there was ZA2RPS in 1970 by DL7FT. Amateur radio is prohibited. Over the last 5 years all attempts to activate this one have failed.

4W1 Yemen - Last operations there were in the mid 70's when 4W1GM and 4W7GR were very active. There was a G station who occasionally operated up to 1978, but no activity since then.

1S Spratley - This one was activated as late as 1984 by DU1CK/1S1 and there have been three other operations in the last 10 years.

VP8 South Sandwich and South Georgia - There was some activity from these in the late 1970 and 1980 but operations were very limited. VP8WTW has a license for South Sandwich at the moment.

S2 Bangladesh - Last accepted operation from here was S21GM in 1981. At this time, amateur radio is prohibited. All attempts to activate this one over the last five years have failed.

XW Laos - For the most part, operations here ceased in 1975-76 with U.S. withdrawal from Southeast Asia. There was an operation in 1978 by a SM station but he only worked a handful.

SY Mt. Athos - The last accepted operation from there was in 1981. With the monasteries' recent ruling future operations from here look bleak.

Stations not covered in the mixed mode but which appear in the CW section are:

ZS2M Marion Island - There was a SSB operation in 1980 by ZS2MI. The last CW operation from there was in the 60's.

3C0 Annobon - The last real CW operation from there was in 1972, 3C0AN, by several OH stations. Rumor has it that this one might be activated this year.

The ones, in my opinion, which stand the best chance of being activated in the next several years are: VP8 (South Sandwich), VP8 (South Georgia), XV, ZS2M, 1S, 3Y and 3C0. Let's hope I am wrong and that ALL will be activated.
What do I need? Six more: A51, FR7(Glorioso), VU7(Laccadives), XZ, 1S and 3Y.

WORLD OF DX

Hope you all did well in the contests over the last several weeks. During the ARRL CW DX Contest, conditions were down; lots of European activity, but that was about all. Not much DX variety in this one. Looks like the new England hold for the top spot was broken by a couple of W3 stations in Maryland. By the time you read this column, conditions should be good on the DX bands for the next several weeks, especially into Asia and Oceania.

AFRICA

Lloyd and Iris have been active from ZS, ZS3, 3D6, 7P8, A2 and Z2 so far. They will be active from Z2 to the end of February. Then they will operate form one more country in Africa before returning Stateside in early April.

A2 Botswana - A22KZ can be found on 14227 at 2000Z.

C5 Gambia - C53GD, operator Patrick, on 14172 at 2020Z, C53EK on 14256 at 2115Z, C56/G4IUF on 14005 at 1900Z, 7004 at 2000Z, 3795 at 2145Z and C53FB on 14170 at 2000Z.

D4 Cape Verde Island - D44BC has left the Island for several months and D44BS is active after returning from the States. He is on 14182 at 2030Z.

D68 Comoros - D68WB on 14160 at 2015Z. D68AM, Alain, on 14197 at 2100Z, and D68JF on 14197 at 2115Z. QSL D68AM via WB2OHD.

EL Liberia - EL2CJ has been active on 7010 at 2350Z and N8DEP/EL2 on 14196 at 2330Z.

FR/T Tromelin Island - FR7AI/T showed in late February on 15 meters with weak signals, after a three week delay. Roland should be there until the end of March.

J28 Djibouti - J28EG, Michele, on 7003 at 2225Z and J28EM on 14183 at 1830Z.

SU Egypt - SU1MB reported to be active on 14190 at 2000Z. He is with the peace keeping forces in the Mideast.

S92 Sao Tome - Luiz, S92LB, still very active on 20 meters. Try 14177 at 2025Z or check Snooky's Net on 14183 at 2000Z.

TZ Mali - TZ6WC on 3790 at 2300Z. QSL via DL4BC.

TJ Cameroon - TJ1CH, Jack on 14198 at 2015Z. QSL via Box 1169, Yaounde.

TL Central African Republic - TL8HM on 14187 at 2150Z and TL8MEF on 14205 at 2015Z. QSL via F6KNT.

TR8 Gabon - Can't miss this one. Try: TR8JLD on 21004 at 1715Z, TR8DR on 7001 at 2140Z. QSL via W2PD. TR8AHO on 14218 at 2050Z. QSL via DK1PO. TR8RAL on 14160 at 2055Z.

VQ9 Chagos - Dale, VQ9QM, been active on 20 meter CW, 14025 at 1800Z. QSL via W4QM. Larry, VQ9LD, is active again, check 14023 at 1600Z, 7009 at 2100Z, and 3510 at 0100Z. Larry will call you sometime, nice surprise. QSL via AJ2W.

ZD9 Tristan da Cunha - ZD9BV on 3792 at 2230Z. QSL via W4FRU.

3C Equatorial Guinea - 3C1AV has been reported on 14179 at 2000Z. Operators name is Mario.

3C0 Annobon - Rumors have it that this one will be activated sometime later in the year by a ZS6 station.

3V8 Tunisia - 3V8PS was active in the ARRL CW DX Contest. He was on 7002 at 2230Z and 3505 at 0145Z. QSL the operation via I1FOU.

5H3 Tanzania - Much activity from this one: 5H3VB on 21292 at 1500Z, 5H3HM on 14182 at 2030Z or 14138 at 1830Z, 5H3CE on 14182 at 2030Z, 5H3QM on 3799 at 0400Z, and 5H3ZO on 14025 at 1830Z.

5N Nigeria - JH8BUU/5NO has been on 3799 at 2300Z and 14148 at 2010Z. YU3KI/5NO very active on CW especially 20 and 40 meters. DF3IT/5N7 on 14212 at 2015Z, JG1FVZ/5NO on 7014 at 0110Z and 3799 at 2345Z. QSL via JF1EEK. N5CJB/5N1 on 14205 at 2015Z.

5T5 Mauritania - 5T5SL, Lothar, on 14029 at 1950Z. QSL via DL8DF.

5U7 Niger - 5U7LC is reported to have a valid license and reportedly will be active on all bands CW and SSB. He will be there for the next two years.

6W Senegal - 6W1NQ on 14163 at 2015Z. QSL via DL1HH. 6W1CK on 3775 at 0715Z and 6W1KI on 14220 at 1950Z.

9G Ghana - 9G1HT, this one is active on 14155 at 2145Z.

9J Zambia - 9J2CCP on 14152 at 2115Z.

9L Sierra Leone - 9L1YL, Sandra, is active on 14193 at 2130Z. QSL via Box 992, Freetown.

9Q5 Zaire - 9Q5RN, operator Roger, on 14180 at 1800-1900Z. QSL via KC4NC. W9JER/9Q on 14243 at 2050Z. QSL via WB0MZB. 9Q5MA on 14236 at 2300Z and 7070 listening 7168 at 0400Z. ZS6USA will be going to Zaire in August for several years. He says getting a 9Q5 license looks promising.

9X5 Rwanda - 9X5WP, Wes, on 14151 at 1800Z on Mondays, Wednesdays and Fridays. QSL via WB6VKD.

EUROPE

OH0 Aaland Island - OH0XX was active in the CQ WW 160 meter Phone Contest in February. If you worked them. QSL via OH2BBM.

SV5 Rhodes - SV5TS is quite active on RTTY on 20 meters, 14090 at 1315Z.

UA1 Franz Josef Land - Several stations active form here: UV1OO on 14025 at 1930Z and 7009 at 1200Z, UA1OT on 14009 at 1830Z, also 1.845 at 0525Z

UO5 Moldavia - UO5GQ on 1.847 at 0455Z and UO4OXD on 14018 at 1500Z.

ZB2 Gibraltar - ZB2HG on 3795 at 0455Z and ZB2FK on 3798 at 0110Z.

3A Monaco - 3A0GB reported to be active on 10.104 at 2000Z. QSL via W2GBX.

AMERICAS

CE0 Easter Island - CE0ZIJ on 3790 at 0430Z and 7010 at 0700Z.

AZ1 South Orkneys - AZ1A was quite active on all bands CW, SSB, RTTY. QSL via Box 5, 1636 Olivos, Buenos Aires, Argentina.

FG Guadeloupe - FG5XC on 14004 at 1305Z and FG4DO on 14024 at 1310Z.

FM Martinique - FM5BZ on 7005 at 1130Z, FM5CW on 7001 at 0100Z, FM5WD on 7007 at 0345Z, and FM5WU on 14013 at 1220Z.

FS7 Saint Martin - NI8K is scheduled to operate from FS7 starting April 5. He will be active on 14170 and 3795.

J3 Grenada - Dick, NF5Z, operated J34Z during the ARRL CW DX Contest in February. QSL via NF5Z.

HC8 Galapagos - K8PYD is rumored to be planning an operation from HC8 shortly.

PY0 Fernando de Noronha - PY7PO was active from here in late February, on all bands CW and SSB.

VP8 South Sandwich - VP8WTW has a license to operate from here as VP8BFC. He hopes to have operated from here in March or early April.

ASIA

BY China - BY1QH has ocassionally been active on 14227 at 2300Z.

HL Korea - HL1PW, operator Youngsoo, has been keeping the 40 meter DXers happy. Check 7005 at 1235Z.

HZ Saudi Arabia - HZ1HZ active on all bands CW. Try: 21004 at 1600Z, 14025 at 1800Z and 3503 at 0200Z. QSL via N7RO.

JY Jordan - JY9RL, Alan, has been quite active on 75 meters, 3795 at 2200Z.

S2 Bangladash - VO1OC/S2 has been reported to be active, working into Europe at 0900Z on 14199. He has no documentation, so will not count for DXCC.

TA Turkey - TA2D on 14210 at 1525Z and TA1E on 3594 listening for North American stations on 3802 at 0550Z.

VU India - VU2TTC is active most mornings near 7007 at 1230Z, VU2UTD on 7005 at 1315Z. VU2GDG, Gopal, was active on 160 meters during December to February. He is QRT now on 160 meters.

V85 Brunei - V85AC is active on 75 meters, try 3795 at 1100-1200Z.

XU Cambodia - XU1SS has been showing on W7PHO's net on 14226 at 2300Z.

XX9 Macao - Phil, VS6CT, activated XX9CT in late February for about 10 days. QSL via G5VS.

XZ Burma - 1Z9AD and 1Z9YL have been active on 20 meter SSB. 1Z9AD has been checking in on the PHO net on 14226 at 2300Z. These stations are not valid for DXCC (they count for DXCA). CQ magazine accepts them for their awards.

YK Syria - OE5JTL/YK on 3790 at 0220Z Sundays, with YU7PFR acting as MC.

OCEANIA

A35 Tonga - If you worked A35WZ, that was NK7K operating in late February. QSL via NE7W.

H44 Solomon Island - H44IA, Bryan, has been active on the low bands. Try 1.832 at 1130Z, 3799 at 1145Z, and 7004 at 1215Z. QSL via Box 219, Honiara.

JD Ogasawara Island - JA1YWX will be active from here March 27 to April 4. During the CQ WW WPX Contest they will use the call JA1LZO/JD1. QSL via JA1YWX or JM1LPN.

KH3 Johnston Island - KJ6BZ, the club station of Johnston Island, has been active on 75 meters. Try 3806 at 0800Z, the operator is K5DUV.

KH8 American Samoa - DF6FK and DL2ZAD(YL) signed /KH8 in February. QSL to their home calls.

KX Marshall Island - KX6DS, Dave, is active on 7002 at 0525Z and can be found on 80 meter CW some mornings.

T32 East Kiribati - JA3YKC and group are planning to operate from T 32 during the CQ WW WPX Contest in March. they will be active from March 26 to April 2. QSL via JH4RHF, Junichi Tanaka, 1-4-6 Kotobuki, Hattori Toyonaki, Osaka 561, Japan.

VK9 Lord Howe Island - VK9LM, Rudi, has now left the Island. Rudi ran into lots of bad luck. While on LHI, he

became very ill and had to be evacuated to the Mainland (VK). Shortly after his return to LHI, he was informed that his home in Germany was completely destroyed by fire. To add to his problems, on an oversight, Rudi forgot to insure his home and its contents. As an added note, for those of you who QSLed to Rudi's home, most likely the cards were destroyed in the fire.

VR6 Pitcairn Island - Karen, VR6KY, is active on 21321 at 1755Z. QSL via Box 1, Pitcairn Island, via New Zealand.

ZK3 Tokelaus - Ron, ZL1AMO, left ZL land for A35AS in late February, after a few day stay there he will go to 5W1CW. After a short operation from there, he will spend a month operating as ZK3RW. He then will return to 5W1 for several days and then cap off the trip with a brief stop at ZK1. QSL via ZL1AMO.

ZL7 Chatham Island - ZL7AA can be found near 14228 at 0310Z.

ZL8 Kermadec Island - Chris, ZL8OY, has been active on all bands CW and SSB. Check 21009 at 2130Z. QSL via Kay Hannigan, The Terrace, Warrington, Otago, New Zealand.

TIDBITS

OE2DYL, Dieter, has available his DX Nets Around the World for 6 IRCs and his DXCC Country list for 5 IRCs. His address is: Dieter Konrad, OE2DYL, Bessarabiestr 39, A-5020, Salzburg, Austria.

The Dayton Hamvention on April 25, 26 and 27 at the Hara Arena and Exhibition Center. For more information write Box 44, Dayton, Ohio 45401 or phone 513-433-7720.

The lone new recipient of 5 Band WAZ was I4BSN.

Jim, VR6JR, made 12000 QSOs from Pitcairn Island before leaving in late January for New Zealand. He will return to G land in the next month to answer all those cards.

Bob, KQ2M, who signed P4/KQ2M, made over 12000 QSOs in 10 days of operation from Aruba. He hopes to convince the ARRL DX Desk to count it as a new one. His best bands for QSOs were 20 SSB, 40 CW and 75 SSB. QSL via his home call.

If you were surprised by the lack of signals on all bands on February 8, you experienced a Sudden Ionospheric Disturbance (SID).

Anyone know the whereabouts of the operator of 5A1TX during the 1960's. Write N2AU.

W6CNA, Dick, has J5WAD's logs for March 84 to April 85. Dick hopes to receive the rest of Vlad's logs in March.

D2BCW, 3V2TL and 3N1U were the Slims of the month.

As of February, there is rumored to be at least 65 rotary beams of 2 to 4 elements on 75-80 meters up to the heights of 200 feet. The average 40 meter antenna in use at contest stations is 3 elements up 140 feet. No wonder my dipoles don't hack the contest pileups any longer.

I like to receive mail, and lots of it. Please send me information on: what you have heard or worked on the bands, what you are doing to improve your station, information of upcoming operations, contest plans, pictures and any other information will be greatly appreciated.

The more mail I get, the happier I am. So, make me happy.

Send to: Arthur Hubert, N2AU
436 N. Geneva Street
Ithaca, NY 14850
Telephone 607-272-0415

You can also find me on 3784 nightly at 0000-0200Z.

MORE DX NEWS

Ed, KB6DAW (of KH9 DXpedition) will be moving to Korea. He is going to stop over at his XYLs QTH in Jamaica for a little DXpedition before going to HL land. Ed's new callsign is AH2BA. Ed and T30AT are making plans to go to KH1 (Howland Isl.) for the 1986 CQ WW SSB contest.

Another Guam operator is being transferred to Turkey, not sure if he will be active or not. Joel, KG6DX

The DX Bulletin Moves

The DX Bulletin is changing hands and moving to California. Chod Harris, VP2ML will assume the duties of editor of TDXB on March 1. Chod has written several books and was recently DX editor of 73 Magazine.

Thailand

Mike Fulcher, KC7V

On a recent trip to the Far East and Southeastern Asia, I was able to attend the Radio Amateur Society of Thailand monthly meeting in Bangkok.

The club station HSOA is active only in major contests: CQ WW, All Asia, CQ WPX and possibly Radiosport. HS1YL (XYL of silent key HS1WR) and a group of dedicated hams have been working diligently with the government in opening up amateur radio again. Currently the group must obtain special permission to operate these contests. According to Bruce, HS1AOL and Barry, HS1AOK, the efforts are starting to pay off. It looks as if another club station may be on the air within two months if everything goes smoothly. This station will probably be able to operate daily, in the evenings only. Individual station licenses are still off in the future.

The monthly meeting is well attended. There was approximately 85 people in attendance at the meeting. About 20-30 of these were from a group called volunteer radio. They are now all studying for their ham tickets. The club was very excited about the possibility of being on the air again. With any luck, the second club station could be active within 60 days. Lets keep our fingers crossed. (KC7V)

KANSAS CITY DX CLUB ACTIVITIES AT DAYTON

At the last KCDXC meeting, the club confirmed that Jim Smith, VK9NS, of Heard Island fame, and his wife Kirsti will be staying at Stouffers Hotel as guests of the KCDXC. Jim indicated that they would be showing slide shows of their trip to Heard as well as several other remote spots they have visited in the last few years Saturday night in the club Hospitality Suite.

Also, at the last meeting K0CS took over the responsibility for the completion of the "New" KCDXC video tape in the next few weeks. A pledge of some financial aid from Midland Electronics and Lance Johnson Engineering helped provide impetus for the completion of the project. Several new and exciting segments should make this tape very popular at Dayton. It will even include a visit from "Sonny" and "Rico" of the KC DX Vice Squad.

The KCDXC Hospitality Suite will again be room 525 at Stouffers. The famous KCDXC Pileup Contest with an all new test will again be one of the highlights of the Hamvention. Excellent prizes will be awarded to the winners as usual. Lots of 807's and other cool refreshments will be available in the Suite for thirsty DX'ers and Contesters to enjoy as they swap lies with their friends. There is little doubt that the Kansas City DX Club Suite at the Stouffers will be the "Place to Be" both nights of the Dayton Hamvention! (KCDXC)

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VE3SR TRIAL IS OVER

The trial of Jack Ravenscroft, VE3SR, is over. Testimony was presented on January 14, 15 and 16. Observers felt the trial went well. Jack is the Ottawa-area amateur who was sued for $35,000 for allegedly interfering with a neighbour's microwave oven, furnace control and home entertainment equipment.

At the trial, CRRL director Ray Perrin, VE3FN, testified that Jack could not be held responsible for the interference. He compared the problem to rain entering a hole in the roof. There will always be rain. you have to fix the roof. The analogy was appropriate.

DOC personnel, who indicated that Jack's station was essentially clean and that Jack had been operating within the law, testified that even their own handheld transceivers created problems for the plaintiffs' equipment. Then the plaintiffs produced a tape recording of a CW transmission copied on their home entertainment equipment. To their embarrassment, it was not a transmission by Jack Ravenscroft, but a transmission by another amateur operating a block and one-half away!

Now the case had moved into written argument. Given what appeared to be a successful trial, Jack should be cleared. However, there could be angles that neither Jack nor any of us have considered -- and there could be a surprise decision. (WESTLINK REPORT)

NEW RUSSIAN SATELLITES

are expected within in the near future. AMSAT reports in American Satellite Report that: "...usually reliable sources in Europe predict the launch of RS-9 and RS-10 early in 1986."

Both of these satellites will be placed in a low earth orbit similar to all prior RS series birds. That is: a polar orbit with a period approximating 120 minutes in order to approach sun - synchronicity. RS-9 has been experiencing some test difficulties, but if these are overcome, it and RS-10 will be launched together. The RS-10 will be similar to RS-1 and RS-2 with a Mode A transponder only.

The ASR article, however, reports some very exciting news: "The big surprise is RS-10 which will probably carry three transponders. In addition to the now traditional RS Mode A transponder, RS-10 is reported to include both Mode K and Mode T transponders as well....Mode K, previously used on an Iskra satellite launch from the Salyut, uses 15 meters up to produce a 2 meter downlink. A 2 meter beacon will be placed at 145.557 Mhz while a 70 cm beacon frequency remains undetermined pending licensing arrangements."

As if all this were not enough, AMSAT also reports that a Soviet "Progress" refueling mission to the Salyut 7 space station in January was to carry with it the Iskra-4 bird. Like prior Iskra satellites, it was built at the Moscow Aviation Institute and carries a Mode K transponder. It is likely to survive only a month or two after deployment because its low 92 minute orbit will rapidly decay. No deployment date for the Iskra-4 is known. (Westlink)

Amateur Radio at Boston Science Museum

is sponsored by the Council of Eastern Massachusetts Amateur Radio Clubs on April 26 - 27, 1986. This exhibit will a projected 10,000 or more visitors to Boston's Museum of Science a view of over a dozen faces of Amateur Radio - HF DXing, ATV, Packet communications and an outgoing message center.

Special events stations, operating under the callsign KA1SM will run 10 kHz +/- from the bottom of the General band limits. Special QSL cards will be available via KA1SM Callbook address.

NEW OTH RADAR

New Over The Horizon radar is in planning stages for the Pacific area. It is to be installed on Ogasawara Island and it will cover the area of Pacific, Central America, Atlantic, Arctic Ocean, Mediterannean Sea and West Asia.

1985 CARTG RTTY SWEEPSTAKES RESULTS

SINGLE OP:		VE2SG	10881
9H1EL	3287220	VO1EE	10100
I2OLW	2768766	KA5LGP	9844
IK5CKL	2169360	LZ2OV	9236
SM6ASD	1187408	YU2CB	8646
AA4FR	1510000	DK5KJ	5124
YU7AM	1124006	VK2EG	4554
G4SKA	516280	SM7BGE	744
K6WZ	273500	W8TCO	288
IK2AQR	260800		
DJ0CP	156496	MULTI OP:	
AB0Y/4	122640	DL6QH/A	347750
OZ4FF	122150	VE3UR	273480
VE2JR	117327	LA3T	22317
DL6LAM	91050	HA6KUD	10164
W6JOX	71850		
SM5FUG	71556	SWL PRINTER:	
KA1LMR	67192	NN4483	385515
GW3EHN	66460	DE1GMH	70312
DJ0JU	47144	VO1PJ/VE8	16404
EA5FKI	37992	DF5BX	8560
SP2UUU	24328		
SP9BCH	23200	CHECK LOGS:	
SM7ABL	13556	VK2BQS, WA6WGL	
KL7PG	11120	VE3RQ, VE3AYL, VE7YB	

QSL ROUTES

AP2SQ	-W3HNK	FT8XB	-F1FLN	OHØBA	-OH2BAZ
AP2TN	-W8QFR	FT8YA	-FE6DZU	OHØXX	-OH2BBN
AP2ZA	-W6NLG	FY5YE	-K5VT(CQ WW CW)	OY/OZ3QN	-OZ3QN
AH8A	-W6OSP	FY5YE	-W5JLU	PAØFM/P4	-W2NHZ
A22BW	-DK3KD	GDØAVF	-W2KN	PJ2FR	-N6KT
A22CA	-AK1E	GJ6UW	-G3XTT	PJ5/K6PVM	-XE2PG
A22DP	-W7GVC	HBØ/DL8	-DL8EAQ	PJ7A	-K1AR
A25/W6KG	-YASME	EAQ		PJ7DX	-K1AR
A35AF	-K5BDX	HBØAON	-DJ2YE	PZ5JR	-K3BYV
A35SA	-JM1MGP	HBØNL	-HB9NL	P29PNG	-P29JS
A35ZH	-W6ZH	HC8X	-K8CW	P4/KQ2M	-KQ2M
A4XJQ	-G4MSX	HC8/KP2A	-N6CW	P44B	-N2MM
A4XZG	-G4XHZ	HC8/N2IC	-N2IC	P48K	-I8MPO
BT1BK	-JA1HGY	HC8/K8CW	-K8CW	P49Z	-W8ZF
BV2DA	-DL7FT	HC8/AB8K	-AB8K	ST2/WA4BWB	-WA4BWB
BV2FA	-DJ9ZB	HC8/NE8Z	-K8LGJ	SU/9Y4RD	-KA2DDJ
BVØBG	-W3USS	HC8/K9AJ	-K9AJ	SV1RP/SV7	-SV1NA
CE9AM	-CE3EEO	HC8/WØRLX	-WØRLX	DL1FZ/SV9	-DL1FZ
CN8CC	-F6FNU	HI8LC	-W2KF	S9ØAS	-IT9AZS
CN8ES	-WA3NCP	HIØJR	-HI3JR	TF3CW	-K1RH
CP6JX	-DK3HL	HKØBKX	-WB9NUL	TF/AI5P	-W3HNK
CR9EU	-G3PFS	HP1XHY	-JA1LW	TK5VN	-FC9VN
CT3BZ	-OH2BH	HW4PA	-FD6IWD	TK/DL4FF	-DL4FF
CU2CB	-N2DUR	H5AY	-ZS4NS	TK/FE5RV	-F5RV
CU2AK	-W3HNK	H5AYB	-ZS6BCR	TL8CK	-F6EWM
CT3/DF4GL	-DF4GL	JTØAPE	-UZ3AZO	TN8EE	-F6ECX
CT3/DF4ZL	-DF4MZ	JTØDJT	-I8YGZ	TR8AHO	-DK1PO
CT3/DF8ZH	-DF8ZH	JTØEC	-UA3EC	TR8DR	-W2PD
CT3/DL1RK	-DL1RK	JW5E	-LA5NM	TR8DX	-WA4VDE
CVØD	-CX1AA	JWØA	-SP2HMT	TR8IG	-N6CW
CVØU	-CX2CS	JWØP	-SP2HMT	TR8SA	-F6FNU
CYØSAB	-VE1ASJ	JY5CI	-G4WFZ	TT8/N7DF	-KØHGW
C21FS	-K6EDV	JY8FH	-G4BWP	TU2JT	-F6CXV
C31LBL	-EA3DDP	JY9RL	-WA6POZ	TU4BR	-KN4F
C53AA	-OH2BBM	JY9BV	-G5VS	TV6CEE	-F2VS
C56/OH2BEN	-OH2BEN	J28EI/S	-FC1JEN	TZ6BO	-DL1SBO
C56/OH1RY	-OH1RY	J34PN	-N4PN	TZ6FE	-DL4BC
C6A/W5WMU	-W5WMU	J37AH	-W2GHK	TZ6FIC	-F6CRS
DJ1US/ST2	-DF2RG	J4CW	-SV8AL	TZ6WC	-DL4BC
DX1N	-JJ3FMP	J5WAD	-W6CNA	T3ØAT	-G4GED
DX9C	-DU9RG	J87A	-N4PN	T32AB	-N7YL
D68DX	-PAØGMM	J87DX	-K1AR	T32AF	-KH6UR
EA6/OH2LP	-OH2LP	J88AQ	-W2MIG	T77F	-I2WWW
EA9NW	-EA4BGL	KH6JEB/	-KH6JEB	VK2EEJ	-WØJEE
EA9RY	-EA9IR	KH7		VK2EVP/LH	-JJ3PRT
EC9IR	-EA9IR	KH9/WK6T	-KG6KV	VK9NM/LH	-DJ5CQ
EL2CJ	-JF2QHC	KHØAC	-K7ZA	VK9ZB	-VK6YL
FH/PAØGMM	-PAØGMM	KHØ/NH6J	-JE1JKL	VKØAQ	-VK5LP
FK8CR	-F6EWK	KX6/N6HR	-N6HR	VKØML	-VK5ABB
FKØAW	-F6BFH	KP4BZ	-KZØC	VP2EC	-N5AU
FM5DK	-F6EQN	L4D	-LU4DCK	VP2ET	-K5RX
FM5WD	-W3HNK	LX9BV	-DL7MAE	VP2MEV	-AJ6V
FOØBRP	-WØJEE	LX/DK2OY	-DK2OY	VP2MO	-WB2LCH
FOØLC	-K6ANP	LX/ON6CK	-ON6IJ	VP2MSS	-KN3P
FP/W1CCN	-K1RH	OA4SS	-KB6J	VP2MU	-WA6AHF
FP/K1RH	-K1RH	OD5BP	-DL1FZ	VP2MW	-WA6AHF
FT8XA	-F6FYD	OD5ZX	-I7AAP	VP2VCQ	-N6ZZ

160 m Bulletin

Founder - Stew Perry, W1BB

Top Band News Americas

Dennis Peterson, N7CKD

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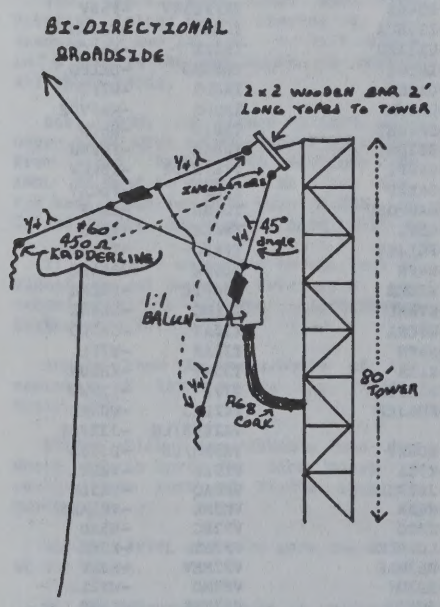
SLOPING ZL SPECIAL

Ted Rachwal, K8AQM

A letter from Ted Rachwal, K8AQM, in Adrian, Michigan has given me another opportunity to pass on to you the following description of an antenna used during the last CQ WW CW Contest. Ted has informed me that while his antennas are rather unique, they are not an K8AQM original. (ZL-Special adaptation.)

The basic description of the antenna is (Fig. 1) that they are two 160 meter dipoles fed out of phase (135 deg). They are connected to a common tie point and then spread out so that the final



300 ohm twinlead has been used, but ladderline is heavier and lasts longer.
Fig. 1

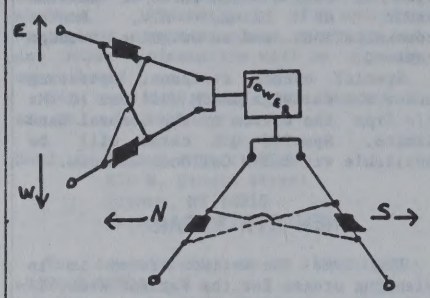


Fig. 2. Top view of antenna system as seen from the top.

structure looks like the letter "A" leaning against the tower.

Fig. 1 shows a side or front view of this antenna at K8AQM. Fig. 2 shows a top view of the same antenna with its adjoining counterpart.

Some knowledgeable people have told Ted that this particular design cannot work! Maybe they're right! Ted writes: "Just think how well they would make our scores look if the antennas did work. We have used this type of antenna from VE2USA and also at FPOHSW with excellent results. The antenna has been hung from a "flat" to 45 deg. angles. Although we think the 45 deg. angle is better, we managed to work 62 different countries on 80 meter cw in one ARRL DX (cw) contest. If anyone can use this Bi-Directional "poor man's" wire beam for 80 and 160 then HOT DOG. I'd really like to know how to make it work and play better!"

N7CKD: Let me say this Ted, and I'm certain you will receive many replies and comments with regards to this antenna from some other more knowledgeable operators than I am. You will discover through your own continued research and investigation, what is going to make the antenna play better as well as what is going to cause a deterioration or degradation in antenna performance. Only you can come up with the much needed answers and reasoning for this antenna's success or failure. Remember, just because this antenna works well for you doesn't necessarily mean that it will perform equally well for others. This is something I learned while trying to get an effective antenna (vertical) on 160 m here in the mobile-home park. Two years of experimenting and developmental work on an antenna that finally meets my criteria. (Worked first West Coast to LZ, DL, LA.)

The following scoring and station description is that of the contest station K8AQM and his operators in the multi operator class. (K8AQM, KA8POW, KN8P, KC8KQ, KB2XR, NI8L, WD9INF, WB8ATA, W8WVU.) The antennas are known as ZL SPECIALS (2 of them), an inverted-Vee, 3 Beverages for receiving, TS-820S, R-820 and an Alpha 76 PA. Ted and his operating crew are members of the MAD RIVER RADIO CLUB and they couldn't decide which was better the night of the contest "the band or the home made chili." In the end however, both were great as you will see by their score below.

QSO's	QSO PTS.	MULTS.	COUNTRIES
630	1478	56	15
		49 states	V2,VP2E
		VO1,VE1	HK,HKO
		VE2,VE3	VP2V,G
		VE4,VE5	YU3,GW3
			CT3,GM3
			PJ2,4U1
			ZL,XE
			GD
FINAL SCORE		104,938	

Please send your comments to Ted Rachwal, K8AQM; 1600 Wolf Creek Hwy.; Adrian, Michigan 49221

4U1UN

Did we get your attention? If so, that was our intention. What I want to suggest to some of our East Coast operators at this time is this: Would it be asking too much from some of you fellows to spend an evening or a weekend at 4U1UN? This will give some of the fellows an opportunity to catch a new one on 160.

I have received several letters and even some phone calls from various operators suggesting this idea. If anyone is interested in doing so and can set up an operating schedule with times and operating frequencies, please let me know well enough in advance so that we can let our readers know. The Europeans and some of our other DX friends would certainly like to snag this one on our Top Band. Look at it this way: you help add another country to someone's country total and you yourself will have the pleasure of finding out what it is like to be a DX station in demand.

INFROMAL RAGCHEWING on 1865 kHz.

There is a rather busy and rapidly expanding group of dedicated ragchewers operating on 1865 kHz from the West coast. This group is not a net or a DX type of operation. Rather it is just an informal get-together found just about any evening when propagation is there.

This group has been operating for four or five years and until now, appears to have been unnoticed. Similar to many other groups in other endeavors, the pattern seems to be a slow start with a few regulars and gradually, as others discover the group, more and more people drop in to say hello. One current estimate is that there are over a hundred regulars. An average evening may have anywhere from three to thirty participants over a period of several hours.

This rather curious unstructured bunch of hams are of many types, from

the "Lock-to Talk" to "Fast VOX." At times they stretch from Kodiak Island to VE3, to Southern California, to on occasion, W1 and W4 land. Hawaii has even been worked. While this isn't a DX operation, many from the group are avid DX chasers, others are contesters, and some are Ragchewers with no interest in DX or contests.

Equipment, power and antennas are as varied as the individuals. From full power, 1/4 wave verticals to 10 watt fixed, even some mobiles drop in to say hello. Locations vary from cramped city lots to pickup trucks to large country locations with extensive antenna systems including multiple Beverage wire antennas.

Probably the most distinctive facet of this bunch is the fact that anyone is welcome to drop in and say hello, from the long time 160 operator to the first-timer on the band, whether newly licensed or just trying the band for the first time. The phrase is "DROP IN" since there is no check-in, no net control, no leaders, no format, no NOTHING but a bunch of typical hams. Some listeners comment that it seems like old times on the "GENTLEMAN's BAND." The mood and operations vary from time to time with the preferences of whoever happens to be on at a particular time. Subject matter is as varied as the individuals. Newcomers with a new interest or a new viewpoint are frequent and bring freshness and vitality which keeps everyone interested.

The summer of 1985 brought another breath of fresh wind to the group with the first annual GET-TOGETHER. The resulting first eyeball was a rousing success. Plans were being made to do it again. This year, 1986, the meeting place, will be the Seaside Convention on the Northwestern Oregon Coast. The convention, as seen by many of the participants, is only incidental. An excuse, if you will, for a get-together. The North Coast of Oregon is seen by these Westerners as some of the prettiest seacoast around.

The photo below was taken during last year's annual (first) get-together and the identity of the three gentlemen standing from left to right are as follows: (Left to R: Earl, KD6TZ - Loma Rica, CA; George, KC7BL (the "godfather") - Sparks, NV; John, K6AXT - Coquille, OR.)

If you don't have an antenna for "TOP-BAND," do the best you can, it might work. With the advent of the newer transceivers, most of which have 160 meter capability, we see more and more first timers on 160. A linear isn't necessary but certainly helps in the summer months with 20 over S9 static crashes. But 100 watts in the winter to a reasonably efficient antenna can bring surprising results.

The above article is a very good example of the type of material that I would like to receive from some of you for future publication in *RADIOSPORTING*. Remember, the material does not have to be typed or formatted on a computer. It can be hand written or printed "neatly" so that I have no problems in interpreting what is being conveyed. For informations sake; I am using a Commodore 64 computer, a 1541 disk drive, a Gemini 10x printer with a parallel printer interface and "PAPERCLIP" Word processor software.

(N7CKD)

RECEIVING LOOP FOR 160

Clarry Castle, VK5KL

After receiving numerous letters and on the air requests for more articles for receiving applications, I thought it would be appropriate to do a rewrite of an earlier article that I did for Clarry Castle, VK5KL (in "The West Coast 160 Bulletin"), on his 10 foot diameter receiving loop for 160 meters.

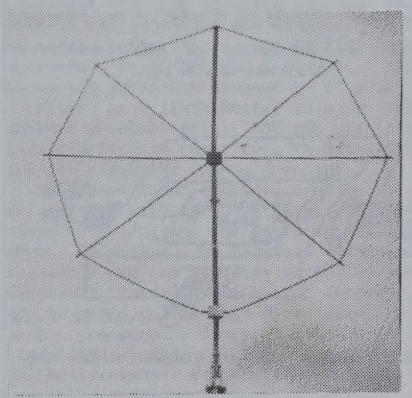
First of all, purpose of small loop antenna is used to cut down or eliminate noise sources which interfere with the reception. Many times the transmit antenna does not work very well as a receiving antenna. Also, many of us are not fortunate enough to be blessed with an abundance of property or space to erect a Beverage antennas. So, we have to resort to other means and make do with what we can; and here is where the VK5KL RECEIVING LOOP is used. Put one up and find out for yourself whether it will work for you.

To start with, you will need a 30 foot length of coax. VK5KL suggests using a piece of RG8A/U coax cable. You will also need a means of supporting it to hold its circular shape. One way of doing it: you can use a wooden block with 6 holes drilled in it to take wooden dowels for supporting the coax and taking the shape and appearance of an octagon.

The wooden block measuring about 6" x 5" x 1 1/2," and is bolted to the center upright support structure 5' 6" down from the top. A die cast metal box, 6" x 4" x 2" was drilled at each end and the bottom was fitted to take coaxial sockets, and then it too was bolted to the center upright frame 5' down from the center of the wooden block support arm structure. (When using wooden dowels, it is suggested that either 5/8 or 3/4 inch dowel stock be used for a more permanent construction and weather abuse.)

The next step is to place coaxial connectors on the ends of each side of the 30' piece of coax previously cut to length. At the exact center of this piece of coax (the 15' point) cut the plastic outer jacket and remove 3/4 inches each side of this center point (total of 1 1/2 inches). Then cut the outer braid or shield and trim back 1/4 inch and replace the plastic outer covering previously removed. This covering is then taped and weatherproofed.

The center of the coax is screwed down to the upright structure using plastic saddles. The connectors on the ends of the coax are now screwed into their respective sockets on the metal box. The coax is then saddled to the 6 individual support arms at equal distances from the center until it becomes tight, and to give a final appearance of an octagon figure. Inside the metal box is mounted a piece of printed circuit board (PCB) with an emitter follower amplifier (see fig. 2) on it and also the fixed capacitor to resonate the loop. (See fig. 3.) The loop has to be resonant on frequency you choose. I used a variable capacitor and by listening to the receiver, I tuned the loop to resonance by peaking for maximum noise. To obtain the same value of capacity we connected the condenser to an inductance and grid-dipped it and measured the dip frequency using a frequency counter. Then we substituted a fixed condenser for the variable one, selecting values until it resonated at exactly the same frequency.



The completed loop is also shown above. (Fig.3) This loop is a great performer on 160 and cuts noise to half that of a half-wave receiving antenna, and has bi-directional properties. There is a big null off the ends (see Fig. 6). Tested on a signal about 10 miles away, we were able to null it from S9 to inaudibility.

You won't get quite the same effect on DX signals, possibly because of the signals having various polarization, but it does null out signals off the side. The next step is to install the antenna on the rotator so that it can be operated remotely from the shack.

It is only necessary to rotate the antenna through 180 deg. because of its bidirectional properties. I have found that on some nights, DX signals from the USA will vary in their bearing according to the prevailing propagation path.

It is not necessary to install the antenna very high, in fact fence height is adequate enough. So if you have a noise problem, are frustrated at not being able to run out a beverage to improve your reception on top band, may we suggest you try a loop. You will be more than surprised with the results.

Further improvements to the performance of the loop have been made through a DUAL J-FET SOURCE FOLLOWER CIRCUIT installed at the base of the loop or at the previous junction of the emitter follower circuit, to match the loop impedance to that of the coax leading to the receiver.

Improved signal to noise ratio has been achieved by balancing the signal input from the loop and transferring to a common output impedance in the source of the FETs. The PCB is rather simple

to make and is mounted into a diecast metal box with coaxial bases mounted at each end and at one side for output to the receiver. Also mounted is an input connector for the 18 to 24 volts DC necessary for operation of the FETS to obtain best performance.

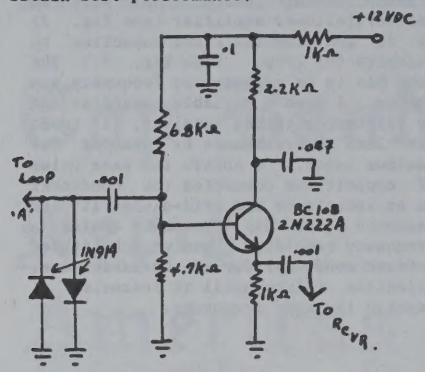


Fig. 4 Schematic of the emitter-follower amplifier.

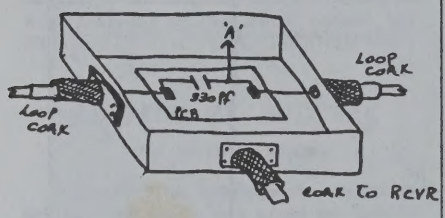


Fig. 5 Inside view of diecast metal box.

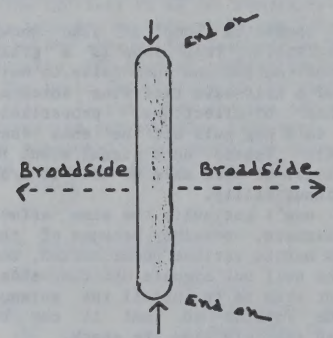


Fig. 6 Top view of the loop.

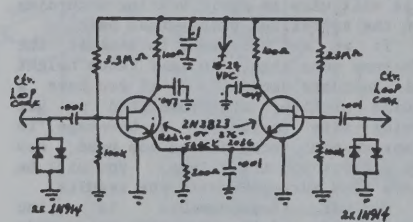


Fig. 7 Schematic of the dual J-FET source follower amplifier.

Capacitor C1 connects between the open ends of the loop coax and so resonates the loop to the desired frequency. This value can be determined in much the same way as previously described. The back to back diodes on each side of the loop are inserted to protect the FETS from static charges, lightning and RF. In operation when switching to transmit, the 18/24 volts is muted so that the unit does not operate during transmit periods.

I would like to share my experiences on the performance of this antenna for restricted space use for the 160 meter band. The antenna is a super performer, especially when used with the newer DUAL J-FET SOURCE FOLLOWER CIRCUIT. It is advisable however, to locate the loop a substantial distance away from the transmit antenna to minimize the coupling. You can also rotate it so that loop is broadside to the transmitting antenna to minimize the signal to the loop.

For simplicity and ease of construction, my loop was constructed of 1/2" cable TV hard line coax with a capacitance of 25.0 pF/ft and an impedance of 50 ohms. I chose the hardline cable because I could get it free from the local cable TV company and also because once it was formed in the 10 foot diameter shape and secured to the mast section, it maintained its physical shape and was rigid.

The C1 capacitor chosen to resonate the antenna at 1828 Mhz was an ARCO 308M variable trimmer capacitor (425 - 1260 pF). This value was chosen through trial and error. This antenna gave excellent results when other methods had failed. You should use a certain amount of "trickery" in achieving optimum performance out of an antenna. Remember, the secret to successful 160 meter operating is accepting the CHALLENGE presented and PERSEVERANCE of attitude. (N7CKD)

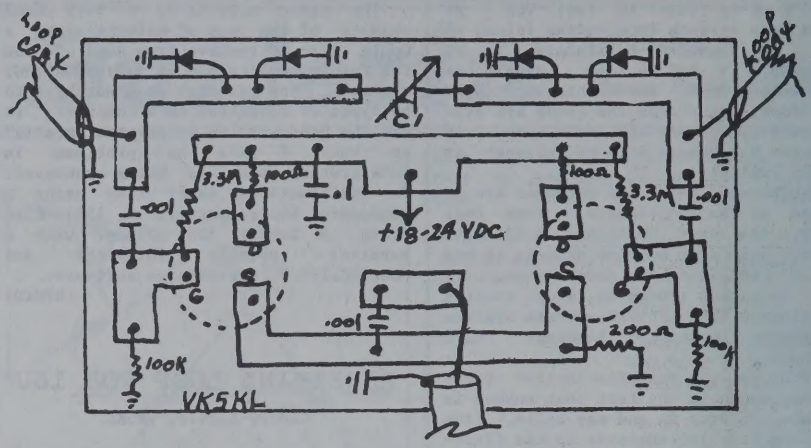


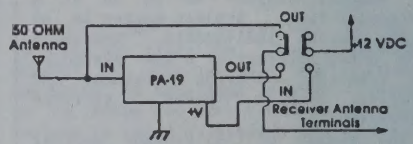
Fig. 8 Full size PCB layout for the dual J-FET amplifier.

DIGITREX PA19 MULTIPURPOSE AMPLIFIER

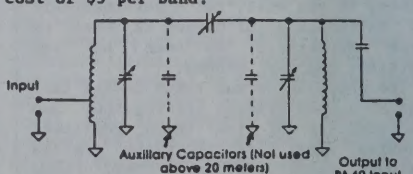
Craig Clark Jr., N1ACH

Digitrex has a neat little pre-amp that will be of interest to many 160 meter operators. The unit is broadbanded (.5 - 200 MHz) and gives an average gain of 19 dB, (voltage out is about 10 times voltage in). The pre-amp has an input and output impedance of 50 ohms and has a noise figure of less than 2.8 dB at 200 MHz. Of particular interest is that the unit will run off 8 - 18 volts DC (gain specified at 12 V DC).

A schematic (below) is shown for using the PA19 as an untuned, broadband amplifier. The switch is recomended for situations where strong signals are present and the preamplifier is not needed.



In some areas, broadcast or foreign SW stations are so strong that it will be necessary to install tuned circuit in the front end to eliminate these signals. The schematic below can be optimized for any frequency range from 1 to 30 MHz. The tuned circuit kits are available from Digitrex at the modest cost of $5 per band.



Some other uses for the PA19 are: frequency counter pre-amp, IF amplifier, transmitter interstage amplifier, and general purpose gain block.

I picked up a couple of earlier models from Digitrex at Dayton several years ago and was quite impressed with their performance. The switching head end of my beverages is 250 feet from the house. To make up for the feedline loss, which admittedly is small at 160 m, I put a PA19 at the headend. I was quite impressed at how it made signals much louder than when they were before. Since I also wanted to use the beverages for 80 meters, I did not put a tuned network at the head end. Interference from broadcast stations was a small problem and was resolved by reducing the voltage to the amplifier and thus reducing the relative gain of the pre-amp. The tuned network shown above has been suggested by Digitrex. However, there are several other designs you can use that can be found in the ARRL Handbook or in other publications.

The cost of PA19 is $9.95 (N1ACH)

160 m DX News

Wally Stefanoff, LZ2CJ

PO Box 73, Levski, Bulgaria

WRC CONTEST

With the first IRSA WRC contest coming up in October 1986 and announced in the February issue of *RADIOSPORTING*, we finally have a contest that will be very fair to everyone around the globe. While it is hard to make the rules that will serve 100 percent justice for everybody, this is probably the closest to ideal one can get. This is especially valid for contesting on 160 meters. Even though, there will be people who will criticize the rules, but I am sure that many constructive comments and ideas for improvement can be incorporated during the first few years.

With different power output limitations for 160 in various countries, three contest power categories will allow fair and more meaningful competition.

The multiplier system in WRC contest will give a better chance for comparison of scores around the globe. Now running 5 watts or 100 watts will not mean wasting operator's time, just to get clobbered by the stations running one kilowatt. The operator skill can really show up by comparing scores in the same power category and more people will get involved in the contest very seriously.

DJ8WL 160 VERTICAL

The following is the description of 160 m vertical antenna built and used with great success by Peter Bobek, DJ8WL during 1984, 1985. This antenna shown in Fig.1, has been erected in august of 1984. The feedpoint impedance was measured to be 40 ohms (resistive) when using 16 quarter wave radials and two ground rods (each 5 feet long) driven into the small creek passing by, about 3 feet from the base of the antenna.

The coax cable used to feed the antenna was long electrical 3/4 wavelength (83 m long, with about 2 dB loss) thus acting as a transformer between the antenna step-up transformer and transmitter output (50 ohms). The impedance of the feedline is 75 ohms. The step-up transformer at the base of the antenna converts the 40 ohms to 90 ohms (2.25 to 1 ratio). This transformer is wound on an AMIDON toroid core T225-2 (Fig.2).

This antenna was mounted on a tall tree at DJ8WL's location. Signal reports obtained from the DX stations have been one to two S-units better with this vertical than with an inverted Vee antenna mounted 25 meters high on the same tall tree. The SWR was measured lower than 1 : 1.5 in the range of 1800 to 1900 kHz and better than 1.2 between 1820 - 1875 kHz!

Peter is keen on experimenting with new antennas every year so he has came up with another type of vertical in 1985. His '85 vertical is shown in Fig. 3. Most of the details are visible in the drawing. According to Peter's calculation, the antenna impedance should have been about 21 ohms. After the antenna was built and tuned, the feedpoint impedance was measured to be 27 ohms. That indicated that the losses were about 25 percent and antenna efficiency was about 75 percent. With given dimensions and 24 pF capacitor disconnected, the antenna was self resonant on 1760 kHz.

Peter used 29 radials, quarter wave long. He did some experimenting with the radials later on and this is what he found: With one radial the antenna impedance was 180 ohms, with 15 radials it dropped to 37 ohms and with 29 radials it was 27 ohms.

When he put 18 radials in the half circle configuration (all radials contained in the northern half of the circle) the impedance was 35 ohms. When he added another 11 radials to fill the southern half of the circle, the feedpoint impedance dropped to 27 ohms.

Peter said it is better to make the antenna resonant below 1800 kHz and then to use different capacitors to match the overall resonance to the feedline.

This year DJ8WL is using similar type of antenna with the horizontal portion about 40 m long and the vertical portion about 20 m long. He measured feedpoint impedance to be 140 ohms with 100 pF capacitor in series with the feedline. He is able to use very short piece of coax between the antenna and transceiver. This '86 model appears to be selfresonant around 1200 kHz with capacitor disconnected.

DL9KR and DF9ZP are using similar kind of antenna at their QTH, we will have more about those in the upcoming columns.

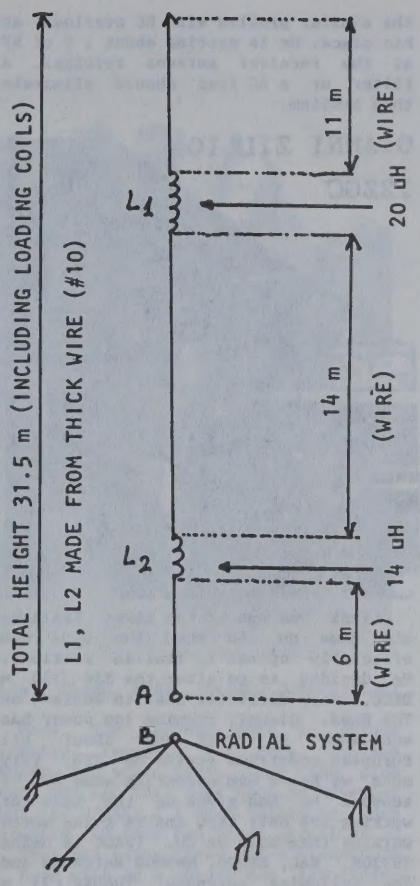


Fig. 1 DJ8WL 160 Vertical ('84)

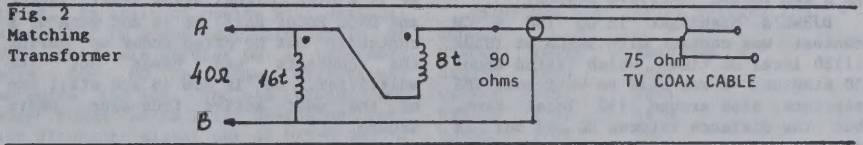


Fig. 2 Matching Transformer

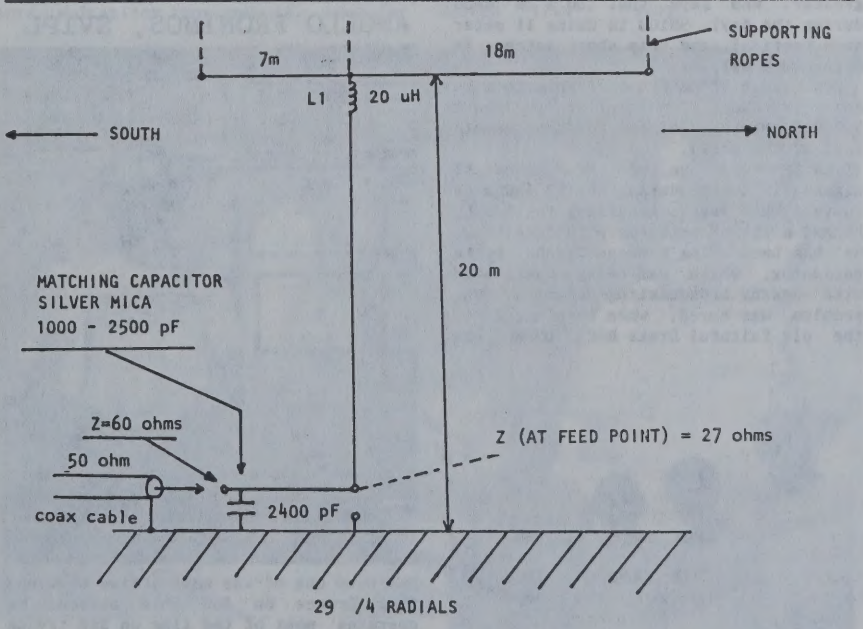


Fig. 3 DJ8WL 160 m Vertical ('85)

Due to illness in the family I was not able to participate in this year's 160 m CQ contest. I did some listening between 2200 - 2240Z. In those 40 minutes I heard 31 countries and about 5 East coast US stations.

LZ1KDP operators were in REF contest this year. Dan, LZ2UU together with LZ1KIC, LZ2DF and LZ2KPD were very active in the contest.

After the contest I have talked to Pierre, HB9AMO, Peter, DJ8WL, Dave, K3JLT, operators from RL8PYL, John, I2ZGC and others. Here is some information.

Pierre, HB9AMO was going to participate seriously in the contest, but had a snow storm second night with increased QRN level and went QRT after about 11 hours of operation. He worked about 320 contacts, 52 countries, 14 US states and 3 VE provinces. 40 US stations were worked in the following states: PA, CT, NY, NJ, GA, VA, FL, IL, OH, MD, IN, MA, DEL, TX.

RT5UY and RT5UL were active in the contest and after that they went to UI and UJ. I will try to get some information about their expedition and experiences.

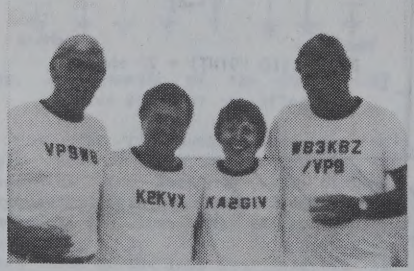
The following prefixes were heard here during the CQ 160 m test: UA2, UB, UC, UG, UI, UJ, UL, UM, UR, UQ, OHO, EA, EA8, EA9, SV, KP4, 6Y5, VP2M, YV, OA, PJ2, PY, UP, UF, UA9, UAO, UO, UH, G, GJ, GI, GM, GW, T77, CT3, 4U1UN, ZB2, LA, 4X4, PZ, Y2, LZ, SP, YU, I, 9H1, HB9, PA, OH, LU, HH, HI, CO, 9Y4, XE, CX, CP, VP2E, KL7, J73, ZD7, OE, 9M2 and others. I hope there were some new ones for many of you, even if you belong to "big gun" category.

HB9AMO has claimed in CQ WW DX CW contest 740 QSOs, 17 zones, 66 countries for 95201 points, which means about 200 DX stations worked on 160 m. This should be a new record. Congrats Pierre!

DJ8WL's highlight in CQ 160 m CW contest was contact with 9H1CG at 1030Z (1130 local DL time), which lasted about 30 minutes. I was able to work some UB5 stations also around 1130 local time, but the distance between DL and 9H1 is greater. Who says that 160 m is dead during the day? 9H1CG is using 11 meter high vertical, and this short antenna is doing very well.

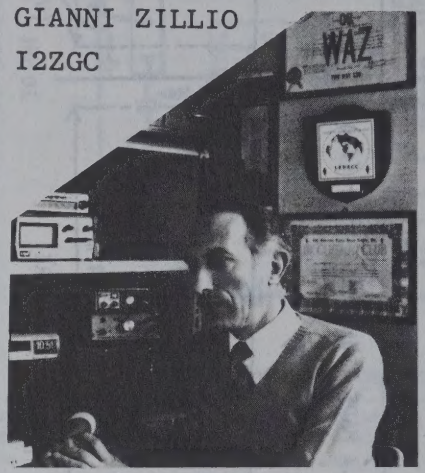
Operators at RL8PYL were able to make about 280 QSOs, 42 multipliers for about 110,000 points. Not bad for that remote part of the world.

DF9ZP was one of the strongest signals in Europe during the CQ 160 m CW contest this year. According to DJ8WL, he had a lot of problems with receiving. He has been using Kenwood TS940S in the beginning, which was being overloaded with nearby broadcasting station. The problem was cured, when he plugged in the old faithful Drake R4C! DJ8WL has the similar problem with BC overload at his place. He is getting about 1 V of RF at the receiver antenna terminal. A filter or a BC trap should eliminate this problem.



Guess who and where?

GIANNI ZILLIO
I2ZGC



Giani was one of the first Italians who came on 160 when the band was officially opened to Italian stations. He decided to go after the SSB 160 m DXCC, very difficult goal to achieve on Top Band. Gianni, running low power has succeeded to work just about all European countries active on SSB. Very soon we heard him operating some CW. I suppose he has given up the idea of working SSB only DXCC and is going ahead working them also on CW. I2ZGC is using TS930S, R4C, SB220, MN2000 matchbox and the following antennas: TH6DXX (25 m high), single Quad element for 40 m (22 m high), single Quad element for 80. On 160 he is using sloper and inverted Vee at 25 m high. Gianni holds 5BWAZ, 5BDXCC and DXCC Honor Roll. He is not much of a contester but he often shows up during the contests and hands out the multiplier. He is now 49 and still one of the most active true-blue DXers around.

ANGELO FRONIMOS, SV1PL

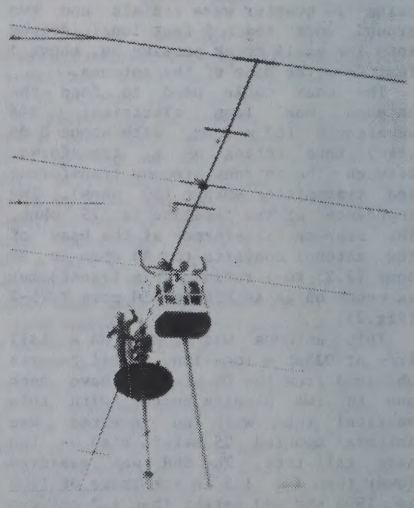
has been one of the most active stations from Greece on 160 this season. He operates most of the time on SSB trying to complete 160 DXCC and 6BDXCC. He already holds 5BDXCC, 6BWAC, WPX Honor Roll and is going to apply for CQ DX Honor Roll SSB and WPX Excellence. Angelo has 283 countries confirmed and 183 zones for 5BWAZ in his 5 year DX career. He operated from SV5 and SV9, and also used J41PL call in some contests. His antenna farm includes 4 element triband beam, multi band vertical for 80 - 10 m, inverted Vees for 80 and 160, short vertical and small loop receiving antenna for 160. In his letter Angelo wrote about the problems with getting permission to operate from Mt. Athos (see also Feb. 86 issue of *RADIOSPORTING*). There are people trying to get the permission to operate from this rare spot, but monks decided to forbid the ham activity forever. The Greek hams also tried to get permission to operate from Albania, but no luck either.

DL - 160 m DXers

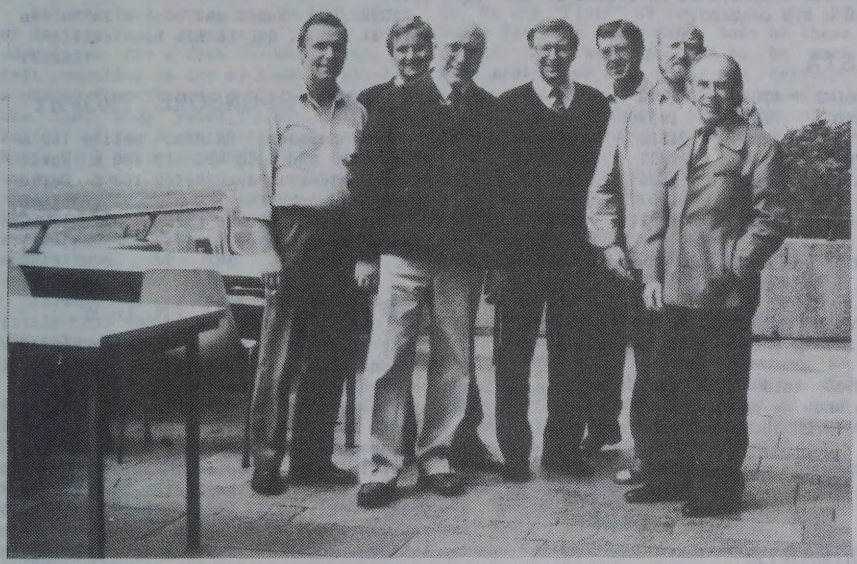
This group meets every year and exchanges ideas, information and they have some good times too. The most active one is Peter, DJ8WL. My first contact with Peter was during the first hour of LZ - operation on 160., when LZ1KDP fired up for the first time back in 1981. Since then we became very good friends and together with W1BB and W8LRL they were my teachers on Top Band DXing. DJ8WL often surprised us with his skill to work DX outside of Europe with low power, but good antenna. (As KM1H mentioned: good receiver and transmitting antenna are mandatory, but 5 kW is not!)

DL9KR is known as one of the most active hams from West Germany, active on VHF/UHF moonbounce all the way down to 160.

Walter, DJ6QT is not too often on 160 from his home QTH, but when he travels abroad, he always tries to operate on 160 as much as possible. Many remember his excellent operation from 3V8ES and D44BC during the 1983 CQ WW DX CW and



UB4MZF (ex UK5MAF) gang installing the 7 element Yagi for 20 m atop of 30 m tower with Alex, UB5MOA and UB5MUV + UB5MNX



The DL - 160 m group: (L. to R.) DL8NBE, DL6WV, DL1BU, DJ8WL, DL9KR, DJ6QT, DL1RK

1984 CQ WW DX SSB contests. He not only gave many operators new country, but also made some respectable scores too. Thanks on behalf of all of us Walter and keep up good work!

Those are the holders of 160 m DXCC in W. Germany: DJ8WL, DL9KR, DL1RK, DL1YD, DJ8FW. You can hear them quite often, especially during the contests.

The W. German amateurs are allowed to use 1815 - 1832 and 1850 - 1890 kHz on CW, 1832 - 1835 kHz on SSB. Italian and Greek amateurs are allowed to operate on 1830 - 1850 kHz CW and SSB.

Many Top Banders here in Europe probably remember the club station UK0AMM few years back. Then the club went QRT and they came back in November 1985 as UZ0AXX. I have talked to them recently and they had super signal on 20 m. They are using their old 6 element 20 m beam with 40 W output and rebuilding the equipment and amplifiers. Some of the projects they are working on include 5 el. 40 m beam already mounted on the tower and awaiting better weather to be tuned. In spite of having W1CF vertical array for 80 m and full size dipole on 160, they are working on a rotatable beam for 80 and some directional antennas for 160. The old UK0AMM has been known as an Asian beacon on 160, the strongest signal out of UA9-0 and a sure multiplier from zone 18. Look for them in the CQ-M contest this year in May, when they should have completed the antenna work and have that old big signal on the air again.

As reported during the last few contests, many people worked or heard at least some 65 countries over the contest weekend! With decent antennas one should be able to work about 2/3 of 160 m DXCC on one weekend.

The new DXCA single band awards make the game interesting even for those who already hold the 160 DXCC. Everybody has a new challenge and I would suggest another one: How many countries can one work during the 48 or 24 hour period? Any takers? We will keep the scores and records. Please let me know.

ACTIVITY INFORMATION EUROPE

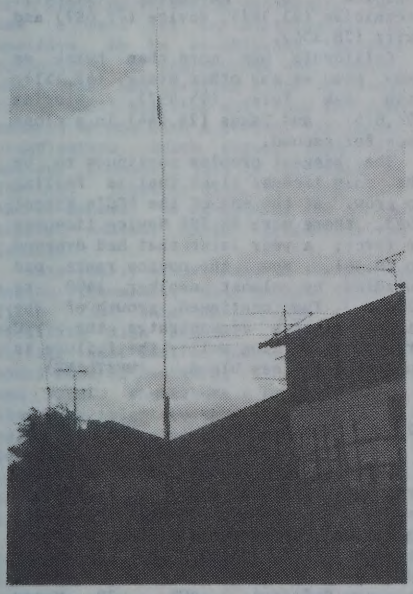
I have tried again to work some stations around the local noon time on 160. The best distance I was able to cover was about 830 km (UB5ZGW, UB5QTA). This is still far behind DJ8WL - 9H1CG distance. If you have any similar achievements, please let me know.

HV2CO (QSL IOXXR) operation on 13. Dec. 1985 on 160 m was pirate according to HV2VO.

My apology for erroneous information about the UZ1OWA! He is not on Franz Josef Land, but in Archangelsk City. The presently active calls from FJL are: club station RZ1OWA, individual stations UA1OB and UA1OT. The mistake came from the new USSR callsign system and Oblast 1 FJL in spite of being now oblast 113 - Archangelsk. Secondly there is only one letter difference between the calls. Thirdly, the fact is that not even some of the USSR hams are correctly informed on the matter. Further investigation down to the source corrected the error.

UA1OT has been active between 2200 - 0000Z.

UZ4CWB	1642Z	1842 kHz CW
UA3SBO	1645	1845
UA6AHY	1702	1843
RA3DOX	1702	1833
UA6HOF	1707	1831
UA6BHB	1710	1832



DJ8WL 160 m VERTICAL

Barry, W9UCW (left), XYL of HK0COP and Francisco, HK0BKX enjoying Hamvention.

UA6HRR	1715	1832	
RA3ATV	1716	1834	
UA6AHA	1727	1922	SSB
UA6HDF	1730	1924	SSB
RA6ATE	1731	1930	SSB
UA6BHG	1735	1847	SSB
UA4YAX	1857	1860	SSB
UB4IHY	1641	1839	
RB5IDR	1648	1847	
RB5ILQ	1720	1838	
UB5HUB	1720	1838	
UB5VEN	1722	1863	SSB
UB5AJA	1722	1863	SSB
UB4VYL	1724	1898	SSB YL
RB5EJF	1726	1890	SSB
UC2IAM	1728	1902	SSB
RC2CE	1742	1845	
UP2BO	2032	1836	
UR2RCU	1852	1836	
UQ2GKJ	2145	1831	

I8RLT, IK6DTB, IT9EXX have been active on 1840 at 1651Z on SSB. Italian SSB net produces some new calls.

I1FZT	1955	1833	
IK5DVQ	1910	1832	
G3BDQ	1950	1831	
G3XWZ	1910	1832	
GI3OQR	2047	1832	
OK2PAZ/P	1731	1834	
OK2PAV	1905	1829	
OLOCOB	1911	1834	
OK3KEU	1935	1830	
OZ4UN	2035	1832	
SM6CPY	1835	1832	
SM6CTQ	2047	1832	
SMONTE	2102	1838	
YU7AU	2102	1843	
SP5INQ	1834	1810	SSB
HB9ACP	1800	1830	
HB9BCI	1905	1829	
OE5KE	1937	1831	
OE5HE	1943	1846	

SV8CS, SV2QI, SV1DT, SV4YK, SV1LK, SV1SQ, all were on 1840 SSB at 2105Z. are almost every evening same stations from SV land around 1840 SSB.

SV5RW, Dimitri was also on 1840 SSB and he was supposed to be active in the CQ 160 m SSB contest.

ASIA

UD6DKZ	1708	1832	
UD6DC	1801	1832	
UF6VBE	1726	1922	SSB
RF6FHA	1916	1831	
UA9FBK	1745	1835	
UA9FZ	1805	1837	
UAOCBS	1650	1832	ZONE 19

9M2AX was heard and worked by some Eu at 2117 on 1833 kHz CW.

JTOAPE and JTOEC appear to be the only stations active from Mongolia on 160.

DU9RG told 4X4NJ that he will soon try to show up on 160.
KD6TB/DU should also be active soon.

V85HG is working on the antenna system for 160 and should show up soon.

OCEANIA

VK6HD, Mike was heard like a local station for about 1 hour into Europe on Feb. 8!

VK3QI was active in CQ 160 m contest.

VK5KL has been worked by DJ8WL at 1938Z on 1832 (Zone 30).

P29PR was active in CQ 160 m contest and shows up around 2000Z on 160. (Welcome to our readership!)

KH6AT said that is almost daily on 160 between 1600 - 1700Z.

KC6/KH2 by KZ5N from Eastern and Western Carolines, and also from Guam later on.

H44IA is going QRT, was active around 1826 at 1100 - 1200Z.

All roads lead to Atlanta, GA. Teowan, TA2C, Jerry, N4JF and Yuri, VE3BMV met at the Southeastern DX Club Dinner meeting in January.

AFRICA

W2ZZ/CT3 will be active for couple of months and has been heard at 2037Z on 1833.

YU3KI/5NO heard and worked in Eu on 1824 at 2140Z. QSL to his home call.

(LZ2CJ)

VE3MFA SPONSORS TROPHY

John Summach, VE3MFA, active 160 m contester and a CQ WPX SSB 160 m World Record holder is sponsoring 160 m World Champion Trophy for the highest combined SSB and CW score in the upcoming WRC contest in October.

6 m ALLOWED IN U.K.

At long last, amateurs in the United Kingdom now have general access to a portion of the 6 meter band. Effective at 0001 UTC on February 1, 1986, British Class A license holders were permitted to operate the prime DX portion of six meters: 50.000 - 50.500 MHz.

According to the Radio Society of Great Britain, while there are no restrictions as to modes and operating times, there are some initial restrictions in other areas. While this is now a "primary allocation" for UK Class A hams, all stations are limited to a power output of 14 dBw for carrier modes and 20 dBw PEP for SSB operation. There is no portable, mobile or "temporary premises" operation permitted, and repeaters will not be allowed on the band. All of these restrictions will be reviewed in one year at which time the Department of Trade and Industry will consider allowing Class B license holders onto the band. (WESTLINK REPORT)

NUMBERS UP AND DOWN

The US amateur radio population reached an all time record of 413,642 operators as 1985 came to a close.

The breakdown by license class shows Generals most numerous with 117,082, followed by Advanced (97,781), Technician (83,387), Novice (77,087) and Extra (38,305).

California has more than twice as many hams as any other state (57,151), with New York (25,897), Florida (24,675), and Texas (24,444) in a close race for second.

The biggest problem continues to be the only license class that is failing to grow. At the end of the FCC's fiscal 1983, there were 86,781 Novice licenses in force; a year later that had dropped to 80,461. Now, the novice ranks had dwindled by almost another 3400, to 77,087. The continued growth of the higher classes demonstrates the VEC program is working well; the failure is in recruiting new blood. (WESTLINK)

WANTED!

RADIOSPORTING is looking for articles, pictures and news items. Also needed are column leaders for the following departments: DX Monoband Reports, IRSA Awards, IRSA Contests, VHF/UHF, Satellite, Computer Hardware/Software, SWL, 80 Meter Activities, Contest Results and Records.

CLUB LIFE

Tom Rosebush, VE3KZE

Welcome to a new column in the newest of Amateur Radio magazines. When Yuri advertised for a Club Column editor, I felt compelled to try my hand at joining a widely distributed publication. For the last four years I have been the Editor of the South Pickering Amateur Radio Club bulletin "SPARC-GAP" and have enjoyed some success in achieving a small degree of excellence with it. Whether my limited editorialship will allow me to satisfy the desires and aspirations of the RADIOSPORTING readers, remains to be seen.

Firstly, I would like to tell you a little bit about myself and the club to which I have belonged for all my Amateur life.

I have been licensed since May of 1978 and hold call VE3KZE, obtaining my license through the auspices of the South Pickering Amateur Radio Club Code and Theory Class. As with many non-technical people the acquiring of that coveted ticket did not come easily to me, however with the help and encouragement of several friends I made it on the first try and have never looked back. After taking the first year and a half off to "work the world" I returned to the Code and Theory Class, but this time to assist in the planning and ultimately in the teaching of the regulations and Code. My expertise for the regulations came from a bit of study and a lot of common sense, with the Code being a seemingly natural talent as I had for over six years experience as telegrapher with the Canadian Pacific Railway. Granted it had been ten years since I had operated commercially, and the railway had used the old "Click and Clack" sounders, but the old fist and ear had held in there and the desire to pass on my humble talent by teaching CW has since become a mild passion with me. I enjoy it!

The South Pickering Amateur Radio Club, or SPARC, as we affectionately call it was founded on November 11, 1976 by a group of Pickering residents. They saw a need for an organization of Amateurs to be established between communities of Scarborough and Oshawa, who already had thriving clubs in place. From a small start of only four founding members we now have a seventy six member organization which serves well the Amateur Community just to the East of Toronto. Together with the North Shore ARC of Oshawa, we co-sponsor one of the biggest Amateur Radio Fleamarkets in Canada.

This yearly event, know as the Durham Region Fleamarket, will be held for the fifth time this April 12th at the Pickering High School, in Pickering Village just East of Toronto. A well honed core of Amateurs, from both SPARC and NSARC, contribute a great deal of time and talent to make this market a well run and smoothly executed event. We learn from each year's errors and correct them for the following year to ensure a continually well planned gathering.

SPARC, as I mentioned before, also runs a Code and Theory Class each fall for aspiring would-be Amateurs. As the teaching is done by active "HAMS" a lot of the lore and excitement of Amateur Radio is passed on to the class to whet their appetite for getting that first ticket and becoming active on the bands. It has been my pleasure over the few years that I have helped with this class to be the "first" CW contact on the HF bands for many a new HAM. Some of these people have since gone on to be much more proficient than their old teacher. A fact that I feel justifiably proud of.

Now that you know a little bit of my origin and of those of SPARC I would like to make an appeal to you the readers of RADIOSPORTING.

To make this column an effective part of this magazine and of interest to all Amateurs I will need input from other Clubs and organizations. I can help to advertised your upcoming events, both social and on the air activities. If your group or Club plan on making an effort to enter a contest, please let me know how you do and if possible give me at least a bare bones write up on the event and I will make mention of it here in this column. Without additional input from other clubs or organizations the information portrayed here will have a decidedly Canadian content as you can well imagine. That is not my intent nor the intent of RADIOSPORTING so please forward material letting me know of your accomplishments or planned activities. If your club publishes club bulletin, please put us on your mailing list and send them to: *RADIOSPORTING*, Box 65, Don Mills, ON, M3C 2R6, we will be glad to publicize your activities.

Tom, VE3KZE

West Texas DX Assn.

1986 officers are: President Les Bannon, WF5E (ex KE5CK, W9ZTD), Vice President Bob Lowery, W5KGX and Secretary/Treasurer is Roger Rose, W5LXS.

CONVENTIONS

ROCHESTER HAMFEST / NY State ARRL Convention will be held at the Monroe County Fairgrounds, Henrietta, NY on May 17 - 18, 1986. For info contact: Rochester Hamfest (716) 424-7184, 300 White Spruce Blvd., Rochester, NY, 14623

ANNUAL NORTHWEST DX CONVENTION July 25-27 at Sheraton Hotel, Renton, WA sponsored by Western Washington DX Club. Contact Andrew Isar, NN7L, (206) 467-1277, WWDXC, PO Box 224, Mercer Island, WA 98040

VISALIA DX CONVENTION

The Southern California DX Convention will convene April 18 through the 20th, at the Holiday Inn in Visalia. Room reservations may be made by dialing (209) 651-5000 and asking for the convention reservation desk. Please do not dial the 800 line. Room rates are $42.00 single and $50.00 double.

Pre-registration for the convention is $38.00 and must be postmarked no later than March 31, 1986. All subsequent registrations will be $40.00. Please make checks payable to SCDX Convention and mail to :

Don Bostorn, N6IC, 4447 Atoll Ave.
Sherman Oaks, CA 91423

The price of registration includes the Saturday banquet and Sunday brunch along with a cocktail party hosted by the Southern California DX Club on Friday night, and the famous Saturday night cocktail party hosted by Henry Radio of Los Angeles.

This year's program will feature many fascinating and interesting speakers including the DX Forum with Jim Rafferty, N6RJ, the contest forum with Dick Norton, N6AA, Lloyd and Iris Colvin, and many others.

Amateur Radio representatives from the People's Republic of China will be in attendance at the Saturday night banquet. In addition to this year's extraordinary program, many fabulous prizes will be given away including: a Kenwood TS940S as a pre-registration prize, a Henry 2K amplifier as the grand prize, and others such as a Yaesu 757, 209 Hand-held, Butternut 40-80 vertical with 160 adapter, and many more.

A special ladies' luncheon will be held on Saturday, so don't forget the XYL. The cost will be $8.00.

POTOMAC VALLEY RC

The Potomac Valley Radio Club meets on the second Monday of the month from September through May, except for December. Meetings begin at 7:30 P.M. The December meeting is held in a Washington area dining establishment. Summer meetings are typically held at various members' QTHs and generally consist of a social event and station tour.

Please call any officer for info on the club. Please call Tom, WA3TAI, to arrange for a program for a club meeting. W3FG is the current newsletter editor. Articles and ads from members are welcome and should be sent to Walt McGugan, W3FG, 1336 Burlington Dr, Odenton, MD 21113.

OSCAR MEETING

The San Francisco Bay Area OSCAR User's Group is pleased to announce there will be TWO meetings concerning OSCAR satellite operation.

The first meeting will be held on Sunday, May 18th, in San Mateo. The second meeting will be held in October as a part of the ARRL Pacific Division Convention.

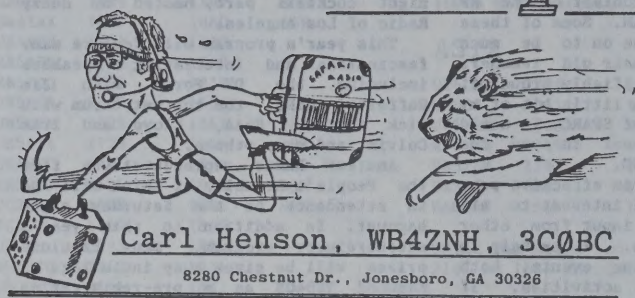
The meeting will last from about 9:00 a.m. until 4:00 p.m. Pre-registration is required and the fee covers the information handouts and a buffet lunch. Profits from registration fee for the meeting will ge forwarded to the AMSAT fund for the construction of future satellites.

The program topics will include information aimed at those just getting started on OSCAR, a review of Phase IIIC, Mode L, Mode A and a session for questions and answers about OSCAR. There are plans for equipment displays, computer program demonstrations, video tapes about OSCAR 10, as well as some of the equipment specially designed for OSCAR operation.

For more information send SASE to:
Ross Forbes, WB6GFJ, AMSAT Coordinator
PO Box 1, Los Altos, CA, 94023-0001

Those who attended meetings before, will receive registration materials as soon as they are available.

DXpeditioning



Carl Henson, WB4ZNH, 3CØBC

8280 Chestnut Dr., Jonesboro, GA 30326

ANGUILLA, VP2EEB

After my very first experience of operating outside of the U.S., I became like a little child waiting on Christmas. All I could think about was that next DXpedition trip. In my excitement, I eagerly tried to convert every Ham that I met. My enthusiasm, for the most part, fell on deaf ears. Carl Parks, W4REI, was the exception. Carl is an exceptional person anyway. His involvement in Amateur Radio was widely varied and intense. Soon we were making plans to operate from Anguilla. The license to operate VP2EEB arrived before I realized that Carl had made application!

Neither of us had ever flown on the small island hopper type of airlines necessary to complete our journey. With two transceivers, a suitcase full of wire antennas, and two trap verticals, Martha, Carl and myself set out for a long Caribbean weekend.

My vertical had two sections which had become inseparably stuck together. This was no problem for Delta's Big Jet which took us to Puerto Rico, but the length of aluminum tubing was too long to fit into the cargo hold of the DeHaviland Dove operated by PRIN-Air. The agent refused to accept my antenna for shipment. In desperation, Carl and I tried in vain to separate them. Finally, I explained to the PRIN-Air agent that if the antenna could not go then none of the three of us were interested in making the trip. The agent pointed down the corridor toward two uniformed pilots walking in our direction: "The only thing I can suggest is that you speak to the Captain." El Capitan was a most helpful gentleman. The Captain assured us that he would solve the problem and we should proceed to the gate for departure.

The DeHaviland Dove has a single row of seats down each side of a single aisle. When our party boarded the airplane, we found that the antenna had been placed underneath the seats on the left side of the airplane. Three passengers had to straddle it for a couple of hours!

Now I have had a weight problem all of my life. One reason I took up running was to help control my weight. On this occasion, I was in one of my heavier phases. Being an aircraft mechanic and the holder of a Commercial Pilot's certificate, I understood weight and balance of airplanes but had never been on an Airliner where specific individual's weight was considered for seating. You can imagine my chagrin when the Co-pilot patted me on the shoulder and asked me to move from the rear of the plane to a seat he had saved for me over the wing for weight and balance considerations! My feelings were injured, but it didn't last long.

Soon my eyes were riveted to the cowling around number 3 engine. Several screws and cam-loc fasteners that hold it in place were missing and others were obviously loose. What really held my attention was the tiny stream of oil creeping slowly over the wing! Now I knew that the engine had several quarts of extra oil, if it had been serviced to maximum, and I knew that with the air rushing over the wing at around 130 Mph it would look like a lot more oil than was really there. No help. I hovered between concerned and scared.

I have always had this thing about how long an airplane remains on the runway during take-off. I read a Boeing advertisement one time for the Boeing 720. It stated that their airplane remained on the runway only 20 seconds after application of take-off power. So I have this little phobia. I sit there quietly saying to myself, "One thousand one, one thousand two, one thousand three, ..." until we are airborne. I have never told anyone this before, not even Martha. I have done this for years. It would seem as if it would make more sense to die in a plane crash surprised rather than sit there and be expecting it because you know the plane is going to run off the end of the runway.

Now different airports have different length runways, so a long take-off run at San Juan is of little consequence. I did think that 35 seconds was more than just a bit long. When we arrived at our first stop, St. Thomas, we had our choice of remaining inside the 120-degree airplane or we could stand outside on the 100-degree asphalt. As we stood looking around the airport, I noticed that we had landed from the ocean toward the island. That direction had two hills directly in front of the runway. It was clear to anyone with my level of aviation experience that this runway was considerably shorter than San Juan's.

There was terror in my heart as I counted, "One thousand thirty-two, one thousand thirty-three, crash. But we did come uncomfortably close to those hills. I have a photograph of the hill as we flew past. The FAA has terrain clearance criteria for certain runways. No obstacle is allowed for X number of degrees up and out from the end of the runway. In order to comply with this standard, St. Thomas Airport had cut little notches in the sides of those two hills. Whenever I show those slides and tell that story, I always say those notches were cut for the PRIN-Air's wingtips. Sometimes I wonder if they weren't!

When we arrived at St. Martin, we went over to Windward Island Airways. At first, they were going to take us over in a light twin, but the pilot discovered that the plane had not been fueled so we went in a slightly large 8 passenger twin. The air conditioning consisted of a small fan mounted on a forward bulkhead.

The runway at Anguilla was unpaved but very near the construction site of the island's first paved strip. Backward as the island seemed, it had a quiet peaceful charm and friendliness that made a person feel welcome. At that time there was only one paved road on the island.

When we reached Maundy's Bay Beach Resort, we found the owners, Paul and Vera, without food. We

paid in advance so Paul could go buy food for us all. Paul and Vera had owned St. Thomas Air Taxi and had sold their business in the Virgin Islands to retire and run a resort on Anguilla. Fate can often be very cruel, and during the rebellion both of their airplanes were fire-bombed. As a result, Paul and Vera had no way in which to bring guests to their tiny hotel. The insurance would not pay off on a loss caused by an act of war.

Maundy's Bay was a pure white unspoiled semi-circle of sand with crystal clear blue water. As we unpacked, we could not help but notice some local children skinny dipping and a handsome sailboat riding gently at anchor in the bay. It was a truly beautiful place which belied the hardship and suffering going on right there. Vera suffered terribly from Malaria and died within a few months of our visit. Paul died about a year later, reportedly from alcoholism.

VP2EEB was before so many contesters discovered the island. Anguilla was only semi-rare at best then but between the low sunspot cycle and our inexperience it was certainly not a DXpedition that anyone other than Carl Parks, Martha and I will much remember. On the other hand, it is certainly a DXpedition that we will never forget! (WB4ZNH)

C53AA

OPERATION FROM GAMBIA

There were 10,000 QSOs made from this tiny, rare West African country during the latter part of 1985 but what turned out a real surprise was the appearance of C53AA on the bands for the CQ WW CW contest in November. AA normaly stands for something extraordinary - something out of the boardroom - and it was no exception for this one.

Following the other two operations and the groundwork laid by his countrymen, Olli Rissanen, OH2BBM, visited The Gambia combining his holiday with the presentation of a complete Yaesu station to the Radio Society of Gambia, a presentation made on behalf of the Northern Califronia DX Foundation (NCDXF).

As part of this happy ocasion, Olli was honored with a permission to use the Society callsign C53AA for the CQ WW contest. More than 3,000 QSOs were made on all 6 bands with an inspired antenna "farm" using bamboo and wire. C53AA hit the airwaves and caught everybody's attention.

The newly established Society is setting up facilities at the French School. The Society's President is Lawrence Jarra, C53AU, an air traffic controller at Banjul Airport. Scotty, C53EU, is Secretary while Tony, C53FG, takes care of the Treasurer's chores. Fr. Mike, C53M, a lifelong amateur in Gambia, serves as Honorary President. The authorities have granted the new Society the right to process license applications from foreign amateurs, so now you know whom to contact in case you plan to visit the country.

Further development is plannned for C53AA with the aim of establishing a versatile West African site to serve The Gambia and the world.

Olli reports The Gambia as being an ideal holiday resort with the local hams making up a super nice group of amateurs with a lot of enthusiasm and good comraderie.

QSLs for the CQ WW CW contest only to OH2BBM.

(SCDXC)

IRSA APPRECIATION AWARD

Carl Henson, WB4ZNH

Carl Henson, WB4ZNH (right), was presented with IRSA Appreciation Award at the Southeaster DX Club dinner meeting in Atlanta. Yuri Blanarovich, VE3BMV, presented this IRSA plaque to Carl for his continuous effort to promote high quality and standards of operating. Carl is a strong advocate of "doing it on your own" while operating on the bands and discouraging the list and nets operation.

Carl and his wife Martha, WN4FVU, have been married for some 23 years and to call them "active" hams would be putting it mildly. "Enthusiastic" would be probably be a better choice of words. Carl was first licensed as a Novice more than 14 years ago and now holds an Extra Class license. He has been a Traffic Handler, ran patches, taught amateur upgrade classes and is currently a Volunteer Examiner. He has written the Southeastern DX Club Newsletter for 4 years, has served as VP for two years and for the last two years as a President of the SEDXC. Carl writes the DXpeditioning column for our magazine. He has numerous operating awards including DXCC (308/314), and 5BWAS. He qualified for the Honor Roll, 20 Meter Phone WAZ, plus several DXCC and WAS from other countries.

Carl is especially known for his expeditions to rare countries. He operated from 6Y5, ZF1, C6A, KS6, 5W1, C5, 8Q7, 9Q5, 4S7, 3D6, YV5, KP4, VE, 5X, TT8, 3C1, 3C0, A22, VP2E, KH6, 5N8, VP5, and possibly some others.

Carl is a tireless organizer and activist. He was behind the very successful DXPO Atlanta and ran for the position of ARRL Southeastern Division Director.

Carl works for Delta Airlines. He also holds a commercial pilot license and enjoys flying his airplane.

The IRSA Appreciation Award was quite a surprise for Carl. More than 100 present members of Southeastern DX Club gave Carl a big hand for his devoted work for the club and amateur radio.

Congratulations Carl, well deserved!

AN ANTENNA EXPERIMENT ON 160

Dan Robbins, KL7Y

Working DX on 160 is certainly a challenge from Alaska. In fact, working anybody on this band often seems a herculean task. In the interest of improving my 160 meter signal, I have done some experimenting with antennas on this band, and I would like to relate some of these experiences.

At the start of last winter, I was using an inverted Vee for 160 with an apex of 110 feet. The angle of the Vee is greater than 90 degrees, but not by a lot. This antenna seems to play very well, but I believe at least part of this is due to the location. The antenna is right on the edge of a small hill, so it has an effective height of 160 to 170 feet in a couple of directions.

In the past, I have used shunt fed verticals as 160 meter antennas. They always seemed better than simple wire antennas. As one example, at the old KL7HDS contest station, we shunt fed an 80 ft. tower and this antenna was better than an inverted V at about a 100 ft. On very rare occasions the two would be the same (usually early in the evening before the band had really opened solid), but normally the vertical was 2 S-units better. Remembering this, it was easy to understand why I wanted to try a shunt fed vertical at my present QTH.

If you are not familiar with the shunt fed antenna, it is easy enough to describe. For most amateur uses, a metal tower is fed with a gamma match (an omega match is also used) so as to make the entire tower a vertical radiator. Normally, verticals are insulated from the ground, but the shunt fed tower allows the tower to be directly grounded. A driven element on a beam which is gamma matched is also grounded, and we may visualize the shunt fed vertical as one half of a gamma matched Yagi driven element, only the element has been tipped up into the vertical plane and the bottom half replaced with a system of radials.

While all this seems fairly easy, there are a couple of caveats. First, although the tower is grounded at the base, the guy wires should be insulated from the tower. Once we manage to force some RF into the thing, we want it to radiate, not go up a ways and then come back down the guy wires to the ground to fry worms. Second, a good radial system is needed. If you have a precision manicured lawn, radials may be a problem, but they may be buried a few inches underneath the soil (although that is a lot of work). In most cases, radials can run along the edge of the house, along fences, and certainly out into the woods without being buried. The length of the radials is not critical, and the more the better. At the KL7HDS station we had about 30 radials, most about 100 feet long. The ideal is about 120 of them, but most hams use a lot less. The difference in signal strength between 120 radials and a simple system of a dozen or so is usually a couple of dB's. Using just a few to start out with will certainly give enough of an indication to determine whether the antenna will be worth more effort. For those with small lots, a shunt fed vertical may be the only way to achieve a decent signal on 160.

In my case, I decided to shunt feed one of my towers and to compare it directly to the inverted vee. The selected tower was 125 feet tall and topped off with a 205BA beam. At the 100 ft. level there was a 155BA on a polar research rotator, and at the 50 ft. level there was a 204BA fixed on the USA. The tower was insulated from the guy wires by Phillystran on top, and ceramic strain insulators elsewhere. Since I wanted to give a fairly good test, I laid out 16 long radials (nearly 1/2 mile of wire), with the idea that more could easily be added if deemed necessary. Configuring the gamma match was more of a job. Some of the variables involved are the spacing between the tower and the match, the height on the tower where the gamma attaches, the thickness of the gamma "rod", and the value of the gamma capacitor. Fortunately, much of this information can be found in an article in May 1975 (p. 34) of HAM RADIO written by John True. He modeled shunt fed configurations to obtain a series of graphs which will give values for many of the variables used. In my case, the 125 ft. tower would appear electrically much taller due to the top loading from the beams. From a graph in the True article, it looked as if 160 feet would be close to the actual electrical height. This value yielded a tap point of 60 ft. and a capacitor of 400 pF for a gamma made of 1 inch aluminum tubing spaced about one foot from the tower. I chose to use some #10 copper wire rather than the aluminum conduit, as it is easier to make changes with the more flexible wire. Past experience had shown that the use of a wire gamma "rod" did not degrade performance, and allowed a later changeover to a larger conductor with little tuning change. A larger, more rigid conductor is preferred as it provides lower "Q" and makes tuning a little less critical. It is also less affected by wind and buildup of rain or snow.

Previous shunt fed towers used the same article for determining a starting point, and the end result was never too far off. The gamma was built according to the graphs. The gamma capacitor was next tuned for the lowest SWR. If the dip in SWR was still too high, the spacing between the gamma and the tower was adjusted by moving the bottom of the gamma wire either closer to the tower, or else farther away until the SWR lowered even more. If the SWR was still too high, then the tap point would have to be changed, and the process repeated until a 1:1 SWR resulted. The tap point is not very critical and 5 ft. increments were small enough. In some cases, it might not be possible to get a good SWR, and then the omega match should be used. This will provide a greater matching range, although it does require another HV capacitor.

In the case of my latest shunt fed tower, the gamma could not provide a good match at a tap point of 60 feet. I tried an omega match with the same tap, and it did give me a 1:1 SWR. Unfortunately, the bandwidth seemed very narrow, and the signals were well below the inverted Vee. Since this tower was electrically longer than 1/4 wave, I would expect a 2:1 SWR of about 100 kHz, at least, and it was only about a third of that. I had the suspicion that the gamma was acting like a vertical

and not really coupling power to the tower. Then I tried a tap point of 45 ft. as this seemed to be in the "ballpark" when I tried some classical gamma match formulas from the antenna book. This gave even poorer results than before, so I moved the tap point up to about 70 feet and tried again. This seemed to work much better. The SWR did dip below 2:1 with a gamma configuration. Pulling the wire away from the tower dropped the SWR even more. So I move the tap up another 5 feet (climbing the tower is very good exercise!). This was even better yet. I had a 1.4:1 SWR at the gamma dip, and moving the gamma wire out to about 2 ft. spacing gave 1:1 SWR at 1840 kHz. The bandwidth was just over 100 kHz, at the 2:1 points and the tuning was not so critical. At last, the shunt fed seemed to be working like it should. The gamma cap turned out to be just under 200 pF with the tap point at 75 ft. looking back at the graphs, a tap point of 75 ft. equates to a gamma value of just over 200 pF and an electrical height of about 205 ft. Possibly all the extra antennas account for the extra top loading. The article speaks of top loading with respect to antennas on only the tower top, which is certainly what most hams will have. Had I been able to take into account the other antennas, I might have arrived at the proper electrical height, in which case the tap point would have been very close, and the value of the gamma cap would have been off only by about 50 pF. I would have been right the first time!

So how does it work? Well, not as well as I had hoped. The vertical is noisier (typical) on receive and signals seem to be down about an "S" unit below the inverted Vee. Unfortunately 160 is not open during the warmer months, so I will have to wait to give the shunt fed tower a thorough wringing out. It does appear to be stronger on some of the Japanese fishing boats which illegally transmit on our band, so it may be that the inverted Vee is only better in a few favored directions, probably where the hill drops off. The real testing won't start until the fall.

There could be many reasons why the vertical is not doing better. There are two other towers of the same height nearby, and each tower has 5 sets of guy wires. There are also 80 meter slopers all over the place. Perhaps there is enough absorption of the signal by all the other metal close by. The average station will probably not have that problem. Further, doubling the number of radials should help out, and going to 120 of them might be enough to make up the difference between the two antennas. I don't know whether the inverted Vee will ever be thoroughly tested, but the shunt fed tower still works well. Remember that the inverted Vee is the best antenna I have used on 160, and in two winters it has managed to work 47 states, over 30 countries and all continents except Europe, which is certainly good from up here. If I didn't have the dropoff in a couple of directions, and the inverted Vee was much lower, it certainly would not be such a good antenna. If the comparison were between an inverted Vee at 60 ft. over fairly flat ground, the shunt fed tower would probably be several "S" units better. Even if the shunt fed were changed to a 60 ft. tower, the loss of gain is probably only a couple of dB's, at the very most and it would be significantly better. In other words, to the average ham in Alaska, shunt feeding your tower will probably yield a stronger signal to DX than the ordinary inverted Vee, unless you get the inv. Vee very very high.

So that is the preliminary results of some 160 meter antenna work. While the shunt fed tower did not trounce the inverted Vee, the vertical did show it was able to put out a good signal. In fact at most QTH's it probably would have been the superior performer. But I will continue to test both antenna's and maybe by the end of the year I will have some more data, which I'll be happy to pass along. If anyone is considering shunt feeding their tower, and cannot find a copy of the aforementioned HAM RADIO article, drop me a line and I'll see if I can't get the information to you. Good hunting on 160! - KL7Y
(Adapted by VE3INQ from The Alaskan Goldpanner)

de VE3BMV:

It would be interesting to hear about Dan's experiences and to know the difference between the tower vertical and the inverted Vee after this year's season. One thing has to be kept in mind when comparing the antennas - the mode and angle of propagation. During one of my monoband contest operations on 80 m, I observed quite a difference in performance between the inverted Vee, vertical and a delta loop. The first night the vertical was better than the other two antennas. The second night the delta loop was better by about 2 S-units than the other two antennas.

The biggest factor seems to be the vertical angle of arrival. One antenna can favor the lower angle, while the other can favor a different angle. There are deep nulls in the vertical pattern at the times. Those who have more than one antenna can attest to this difference in performance. This could also change as the night progresses. Even the small loop antenna can sometimes hear things that the other "mightier" antennas can't. When is the best time to test and compare antennas? The contest weekend of course. Many stations from all directions are on. Switching the antennas can be an eye opening experience. The more of them one has, the more stuff could be heard and worked. With low band antennas it is also important to consider the metal objects, towers, guy wires and other antennas around. They can often help or hinder the reception. Sometimes the small loop can be simply working as a coupling to another antenna or structure. I had some real interesting experiences in that area which I will elaborate on in the following issues.

The main thing is to experiment with various configuration and carefully observe the results, keeping in mind the distances involved, propagation modes, etc. Sometimes, a seemingly "lousy" antenna could be a real winner at some obscure angle. The low band antennas have to be tested in a real life situation. Modeling them on higher frequencies does not represent a real life situation. It is hard to scale "mother Earth."

Another surprising thing is coming to light: signals on the 160 m band do not always come through the shortest path. There is some sqewed path propagation going on, similar to that we have experienced on 20 and 40 m. As sunspots go down it appears that skewed path propagation is happening on 80 and 160 m. With low sunspots, come low angles. Verticals for long haul contacts are definitely in. Inverted Vees and loops are still kings of the hill for the close by stuff up to about 2000 miles. At times there could be quite a difference on receive and transmit for one particular antenna too.

CONTESTING AT POTOMAC VALLEY RADIO CLUB

Mike Colesante, KC8C

CQ WW PHONE AT W3LPL

The CQ WW Phone Contest was an unexpected surprise last year. For several days before the contest the solar flux hovered in the mid-nineties. The typical solar flux for this point in the cycle is 60-70.

The 'LPL crew was a mixture of regulars and newcomers. The principal operators were:

160	AI3M
80	KA1GD/W3LPL/K3DI
40	KM3T/W3MR
20	KC8C/KX3Q
15	KF3P/K1RZ(ex-CT2FH)
10	W3LPL/KK1Z

The test started with a bang. For the first time in a few years all six bands were going full bore. Even 10 meters produced about 30 QSO's before closing.

A look at the top 3 US Multi-Multi scores shows that scores were up substantially. At 'LPL our scores were up on all bands except 40 which stayed essentially the same probably due to the tremendous conditions on the higher bands, particularly 15 meters. 160, 80, and 40 were up in VE QSO's with 80 and 40 manned around the clock. K3DI did an exceptional job on 80 in the daytime luring all those non-contest VE's into the test.

Ten meters offered a DIRECT opening to Eu on Saturday which really brought the multiplier to a respectable level. This was welcome relief after the deplorable conditions in the ARRL last spring. Sunday was primarily a day of typical sunspot minimum conditions with the band open mainly to the south.

Fifteen offered tremendous Eu runs both days as can be reflected in the multi scores and the tremendous single op efforts of K2EK and N8II.

Twenty meters was its usual jungle and was aptly nicknamed "Fort Apache- 20 meters" by the Springsteen ("Born to Run") crew. Latin America was good until nearly midnight on Friday with a sparse but decent VK/ZL opening in the middle of the night. On Saturday the band had Eu runable by about 1100Z. We acquired 14150 at about 1230Z and were able to maintain it for about 13 hours. The Eu runs were at times tremendous with several 95-100 hours. For the first time in a few years the Eu and JA runs overlapped. Sunday was a little tougher. We seemed to have a hard time establishing a frequency early in the day and finally settled in for awhile at 14302 and then 14166 which started to work. The signals were quite a bit weaker and the work more tiring than Saturday. I guess the combination of slightly worse conditions and the fact that we had worked down to the weaker layers of signals made the difference.

Mark and I have started a "Dipoles for weak Europeans" fund. If you'd like to contribute call 1-(800) WEAKSIG. A few hours of working stations that seemingly run ten watts to a pair of rabbit ears will convince you of this need. We did get many reports of being the loudest signal on the band proving that Frank's new W1RR designs on the 6 element yagis were worthwhile. The 4/4 stack seemed to work better on Saturday while the high 6 did a better job on Sunday.

Forty had success with CQing and listening below 7100 and Eu didn't drop out in the evening as it had done in the spring. There were not as many stations to the south worked as in the spring when we worked tons of CP's, CE's and other America Latinos.

The Asian DX was plentiful on twenty with 3 4S7's, 4 VU's, HS, BY(there were three on), YB, 3 DU's and other such goodies in the log.

That's about it for this year. It is my feeling that this crew can beat that "other Multi" from the new 'LPL. Tune in next year for the results!

1985 CW SS DIARY

As has been the case for the past two years, I trekked back to my home state of West Virginia to operate the 1985 CW Sweepstakes from the QTH of N8II. 1983 and 1984 had been frustrating due to a varied set of problems. 1983 found me right with the leaders at sleeptime only to have a drunk driver take out a power pole one hour after I got on in the morning and leave us without power for three hours. 1984 found me with a blown front end coil in one of the TS-830s, which wasn't realized until the damage to the rate was done.

This year I was determined to go through without problems. I ventured up to Jeff's one weekend in October to help with some antenna work and to be sure everything was in shape. One of the things we did was to replace the 40 meter dipole with a quad loop. This didn't seem to do the trick, possibly due to the bottom being quite near the ground. A Delta loop was also tried with similarly disappointing results, so the dipole was put back up. It served quite well as will be seen. We also replaced Jeff's 80 meter wire vertical with one made of tubing, which went up on the third try looking like a piece of saturated vermicelli.

Friday before the contest arrives and I'm raring to go. I do my grocery shopping at lunchtime in order to have as much time as possible on Saturday to relax. I arrive at Jeff's about 6:30 and after pizza we spend the rest of the evening discussing the previous weekend's WW SSB test.

Saturday I sleep till about 10:30 a.m. and then I'm ready to subject Jeff's station to its annual rape for my SS setup. As in the past, the station consisted of two TS-830s (mine and Jeff's), SB220, SB200, CK2, stereo headphones, and my "high tech" SS box which allows me to hear either rig in either ear or both ears and allows switching the keyer to either rig. This capability of having two bands ready is advantageous during the first few hours and during the fatigue filled Sunday afternoon stretch. After the rig problem of last year I took precautionary measures. My first thought was to build two sets of W3LPL bandpass filters, but the hectic schedule of college football games and contest and newsletter preparation in the preceding

weeks coupled with no work space in my apartment led me to use a simpler, though not as flexible, solution. I have found that listening on two bands simultaneously or calling CQ and Search and Pounce on another is not extremely productive. Therefore, I decided to use one rig and ground the antenna switch on the other. This proved to work quite well and still allowed an instantaneous check of a second band with the flick of two switches. One rig did duty on 80/20 while the other held forth on 40/15.

After the traditional pre- SS steak, Jeff and I split, with Jeff heading to Washington and me returning solo to the station. With the solar flux still hovering well into the 70s, I decided to check 15 and 20. Twenty was sparse but the big guns were there. Called a few CQs and had a mini JA pileup beaming west! This is a little early for JAs to be strong and runable. Please be there in CQ World Wide!. Decided to skip 15 and went 20/40 at kickoff. Run around and call a few people. N5AU: wonder who is operating? Turns out to be N5RZ; guess Randy has retired and didn't make the trip back.

2100Z and off to the races. Start calling people on twenty. KE7C NR 1 B N8II 67 WV and off we go. AA5B gives #4 - good start! QSO #6 goes to N5JJ whom I have picked to win it all. Stay on 20 until 2109Z and 11 QSOs, then switch the phones and keyer to 40. KJ9Z starts things off and by interspersing CQs with Search and Pounce the rate starts developing. Back to 20 m at 2121Z and 26 QSOs. Work KOZX and then the first taste of PVRC competition, K3ZO. I'm three ahead of Fred, but I know he will be there all the way.

The first hour yields 78 QSOs and 36 sections. This was down from last year's 81 and short of my goal of 90 but I'm satisfied. Things continue going well with CQing and moving around. W3LPL is worked at 2209Z. I'm one QSO ahead of Frank, a first! Last year we were even. I hope this is a trend. However, I know my multi-multi mentor will find a way to get ahead.

Twenty and forty continues. I'm pleased to find myself ahead of several big guns, even the 5's and 6's. Some of the big scores seem to be developing. KY7M, W5WMU, and N6TR/7 are all giving bigger numbers. Twenty continues good until 2330Z, with many tough sections going into the log. SK, ND, VT, WY, SD, and my nemesis of 1983: SJV. I go down to 80 at 0002Z and stay there exclusively until 0324Z. CQing is having good results and I vary my CQ frequency and sending speed more often than in the past. EPA is not worked until 0055Z, strange! At 0100Z, four hours into the test, I have 273 vs 300 goal, not bad. I'm 7 QSOs up on W2RQ, another key east coast competitor, at 0231Z. South Carolina comes at 0312Z for section 68 and at 0324Z I jaunt back to 40. The 5's and 6's are bodaciously loud. KORF gives #44 at 0341Z - what happened to George? Back to 80 at 0355Z after grabbing two Nevadas back to back for section #69. The skip is still a mix of short and long. Perfect! Last year the skip on 80 went long early and signals favored the vertical; this year it was the dipole all the way.

The success continues. I return briefly to 40 at 0451Z in time to catch KH6RS for #70. I'm now left with VE4, VE6, VE8, and KL7 to get. Back to 80 and things continue well. No new multipliers tonight. Eighty continues to provide everything from MD to VE7.

During the 0700Z hour things slow down as usual and I start switching back and forth between 80 and 40. The westerners are even louder! K6LL is up to #756 at 0827Z, N4WW is slightly behind me. K4JPD is worked at 0930Z with the strongest signal on the band and 10 QSOs ahead of me. I had originally planned on going until 1030Z - 1100Z or about 750 QSOs, but things are slowing so I shut down at 0934Z with 684/70.

I'm awake at 1230Z. I'm always afraid of oversleeping this short rest period, so I set 3 alarm clocks. I only seem to remember one (my trusty 15 year old BIG BEN) going off. I'm amazed at how refreshed I feel. I had decided to reduce the intake of Pepsi and junk food this year and had subsisted the first half of the contest on cider, raw trail mix, and yogurt. This may set a trend for the future. I get up, inhale a container of yogurt, and am off to the rig.

I'm back on at 1250Z and 80 is still going. I work about one a minute until 1317Z when I clean up the newcomers. I move up to 40 at 1323Z and things sound great. I was worried before the contest about the morning being slow, but his was not to be the case. The first hour on 40 yields 63 QSOs and is the first time since 1979 that I've had a 60 hour in the morning. Signals are getting very loud with no apparent skip zone. West PA and MD stations are 30 dB over S9 and stations to the west are still workable. A slight lull develops at 1515Z so I decide to check 20. The band is open and a fair hour develops. A VE4 calls me for #71, thank you! At QSO #824, at 1611Z, it is back to 40 with conditions still great. The casual operators with the low numbers abound. The next hour is a 54 and at 1717Z I take 30 minutes off. Now the moment of truth arrives. I know my slowest hours are usually in the 1800Z - 2000Z period. I'm going to try to go 30 on and 30 off during this period and hope to get some of those missing multipliers.

I try out 15 starting at 1747Z but there just isn't much there that I haven't worked. My total 21 MHz output is 12 QSOs and VE6 (#72) is the only multiplier. 1821Z - 1851Z is off time again. Keep pushing! 40 should be hopping again at 2000Z or so. I work my way across 20 and 15 and at 1957Z find VE8QST with very few takers. Two calls with my beam to the west - no luck. Swing it to the north and snag him for #73. My margin notes show about 12 QSOs up on K5GN and 25 up on Tree at this time but I know this is irrelevant due to off time and demographics.

Back to 40 at 2016Z and the rate nudges up. I go until 2051Z and after working the guy with the second best call in ham radio, K8CC, I take another 30 minutes off. Back on and I have a decision to make: put the beam on KL7 and spend time on 20 looking and CQing in that direction or stay with the rate? I decide to stick with the rate. Jeff arrives during my next off period (2143Z - 2213Z) and disagrees with my strategy. I stand by my guns and hope that W3LPL will miss KL7 also.

The rate picks up at 2215Z with the next hour being a 32. I start checking 80 again at 2322Z and spend the rest of the contest alternating between 80 and 40. QSO #1000 goes to KOGJX; there is something nice about hearing that fourth digit! 1001 goes to K3UA, another SS "Big Gun" obviously sitting this one out as he gives me #139. The last break goes from 0026-0110 and the last 110 minutes brings 45 QSOs, better than in previous years. WA0WWW closes things out at two minutes till for #1068.

Off to 3830 KHz to see how things came out. It

appears that K6LL with 1191/74 took it. Good job, Dave! Unfortunately all the contenders have sweeps and I'm edged out in the east by W2RQ and K5ZD/1 by virtue of a few QSOs or the extra multiplier. Frank doesn't show up so I give him a buzz at about 0320Z and he groggily announces that he had about 1100/74. He found WL7E giving out a low number at about the time I mentioned that I should have been looking that way. I guess that was my only real tactical error and something to keep in mind.

I ended up with 1061/73 after dupes for 154,906 points, breaking Jeff's old WV record. 509 were made on 80, 388 on 40, 159 on 20, and 12 on 15. Jeff rumors about a 2 element 40 meter beam and a TS-940 next year. Hopefully this will drive me to the 1100 mark or beyond. (PVRC)

CW SS ANALYSIS

A frequent topic of discussion between my CW SS host, Jeff, N8II and myself is the level of participation in the CW SS. Jeff doesn't like this contest because he says it has gotten too slow. I haven't noticed much difference in the 7 or so times I've operated and decided to do some research:

Year	QSO's by winner (not counting Caribbean)
1973	1085
1974	1149
1975	1214
1976	1235
1977	1238
1978	1218
1979	1233
1980	1181
1981	1246
1982	1216
1983	1278
1984	1187

The average number of QSO's made by the winner over the last twelve years was 1208. With the exception of 1973, 1974, and 1983 the totals have not varied very much. I guess operating all those slow hours on Sunday afternoon in the east makes one think differently.

In my opinion, many of the section, division, and overall spots are decided in the slow hours. Comparing my own performance over the last several years against the winners at various times has lead me to conclude that the top 50 or so operators do about equal in the peak hours, but the winners do better in the slow periods (Frank, W3LPL kills me here every year!) (KC8C - PVRC)

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

SCORE RUMORS -ARRL DX CW (* = PVRC)

M/M

CALL	160	80	40	20	15	10
W3LPL*	64/46	215/74	609/88	1145/93	368/79	28/15
N2ME	72/48	335/76	520/92	1270/100	290/81	22/14
K2TR	64/45	208/65	720/98	1130/90	207/69	24/14

S/O

K3ZO*	1750/268
W3GRF*	1780/285
K5ZD	1232/235
K1AR	1600/290
K3WS*	100K, 2W QRP

HOW TO MAKE QSL MANAGER HAPPY

Terry Baxter, N6CW

1. QSL cards

Your QSL cards should have the QSO information and your callsign on the same side. If they are not printed that way, write your call on the information side. It is very time consuming to turn cards over to find your callsign. Thirty five percent of cards received have this problem.

Have cheap cards available to send to managers of expeditions (they are usually thrown away). Save your nice cards for non expedition stations.

It is essential that you have the correct date/time/band etc. on the card. Send separate cards for each band, and separate envelopes for each if you are in the hurry to get cards returned. Any card received that is not found in the log on the first try, or multiple cards which require extra time are put aside until all others are finished.

2.Envelopes

Always enclose an SASE. Use standard letter size envelopes, preferably the self sealing type. Legal size and 5 x 7 sizes are a problem to file.

3.How to put it all together

Fold your return envelope (SASE) in half, and insert in sending envelope with the fold at the bottom. This keeps your SASE from being cut in half with a letter opener. If you are enclosing a green stamp (dollar bill) with the card, place it in the fold of the SASE, not inside where it may be not found. Finally, place your QSL in the fold of the SASE. Following these instructions will result in a neat package with the card, green stamp or IRCs and SASE all coming out of the sending envelope in one motion.

4.Other hints

Don't write nasty notes to the manager about the expedition (he is fair game however, if he was on it).

Do have patience. It takes time to have cards printed following an expedition, and this causes a huge back log to answer. Following the above instructions will insure a quick response.

If your card is rejected as NOT IN LOG, wait several months until the manager is caught up and try again (sometimes we make mistakes). (SCDXC)

IARU MEETING IN NEW ZEALAND

Just before year's end, the Administrative Council of IARU, the International Amateur Radio Union, met in Auckland, New Zealand, and Melbourne, Australia. The Council adopted a new policy on preparations for WARCs or World Administrative Radio Conferences, reorganized the IARU Monitoring System, adopted a new plan for beacons in the 28-MHz band, made improvements to the Worked All Continents Award, and recommended several changes to the IARU Radiosport Contest, including renaming it the IARU HF Championship and eliminating contest operation above 30 MHz, shortening the contest from 48 to 24 hours, and allowing contacts with headquarters stations of IARU member-societies such as CRRL to count for multipliers. (CRRL)

WHAT EVER HAPPENED TO SWL?

Donald Dickerson, N9CUE

If you are like most amateur radio operators and many communications professionals, you probably got your first taste of radio many years ago, on a used shortwave receiver or maybe you build a 3 tube regenerative receiver, as I did. In the intervening years since those first exciting discoveries were made as a shortwave listeners, other aspects of the hobby or other career interests have occupied most of our time and energies. Just listening can still be one of the most pleasant, interesting and perhaps even relaxing parts of our hobby.

What is there to listen to other than the ham bands you ask? Plenty! The foreign broadcast bands are as crowded as ever with more and more countries each year clamoring for your attention. There are even two new type of shortwave broadcasters on the block. Both originating from the U.S.A. Three or four new religious broadcasters have begun operation in the last two years and we even have commercial shortwave stations to contend with nowadays. So far commercial shortwave stations have shown an obvious lack of creativity in that they often "dump" local FM programming, commercials and all, right into the middle of the shortwave bands. But what they lack in programming they make up for in watts! You can still hear just about any political or religious perspective you are looking for. All the way from Radio Moscow's "Radio Peace and Progress" to the Voice of America's anti-Castro station "Radio Marti." From the fundamentalist Baptist in Texas to Islamic the fundamentalist in Iran.

If foreign broadcasting is not of interest to you, there are plenty of utility stations, CW, SSB and RTTY to listen to. You can find almost any kind of radio transmission imaginable between 3 and 30 MHz and some you've never imagined. From French Naval stations on remote Pacific Islands to Russian Space station communication.

Commercial and military marine stations operate CW, SSB and RTTY on the 5, 8, 13 and 17 MHz sections of the spectrum. You might be surprised at the number of stations and countries you can log on any given afternoon or evening.

Among your other choices are commercial aircraft communications frequencies. Not only will you hear air traffic from around the world but you will eventually run into a hi-jack or two. Or perhaps listening to the Coast Guard, Strategic Air Command or Air Force One is more in keeping with your tastes. They all operate SSB Nets in the 5, 8, 13 and 17 MHz bands. On Air Force One, President Ronald Regan, according to a recent report by the major TV networks, ordered the interception of an Egyptian aircraft over the Mediterranean Sea. The SAC doomsday planes which are airborne 24 hours a day, receive coded messages from SSB ground stations regularly. Government law enforcement agencies such as the FBI, DEA, FEMA, AFT, FCC and others, operate HF nets. So do the people these agencies are usually looking for such as drug smugglers, organized crime and various other unsavory types.

The agency I find most interesting to listen to is NASA. Though you can not hear direct communications form the Space Shuttle, there is plenty of support communications from observation ships, aircraft and ground stations. Just prior to, during and shortly after a shuttle launch, you can hear a play by play description of a launch from a pilots point of view. This can make for some very interesting listening. We are not the only ones to use the HF bands for space communications. The USSR has historically used much lower frequencies for their space communications then their U.S. counterparts. Wide band FM and data transmissions to and from the Soyuz space station have been monitored in the 18 to 21 MHz range. You can also hear data and beacons from various Russian satellites and their space tugs.

To this long list of stations you can also add Central American military units, cruise ships, oil rigs, U.S. and foreign embassies, and the numbers stations of the world's intelligence services. There's enough to keep you busy for a while. I have included a few of my favorite frequencies to help you get started. So, what has kept you locked into the ham bands so long? You have a whole new world to discover, or is that re-discover?
(Just remember your obligation not to divulge contents of communications not destined to you! Ed)

H.F. SPACE SHUTTLE SUPPORT

		- USSR SOYUZ/SALYUT VOICE
2.622	MHz	Booster Rocket Recovery
2.678	"	Cape Kennedy
3.385	"	NASA Tracking
3.395	"	NASA Tracking
3.850	"	Johnson Space Center
3.860	"	Goddard Space Center
5.190	"	NASA Ships/Primary
6.693	"	Support Aircraft
6.708	"	Support Aircraft
6.723	"	Kennedy Space Center
6.896	"	Kennedy Space Center
6.983	"	Tracking Stations
7.416	"	Support Aircraft
7.675	"	NASA/Kennedy Operations
7.765	"	Support Aircraft
8.972	"	US Navy Atlantic Support
8.981	"	Support Aircraft
9.043	"	Support Aircraft
9.132	"	Support Aircraft
10.780	"	USAF Cape Radio/Primary
11.205	"	NASA Pacific Operations
11.407	"	Booster Rocket Recovery
13.170	"	Support Aircraft
13.213	"	NASA/Kennedy Operations
14.280	"	Johnson Space Center
14.295	"	Goddard Space Center
14.456	"	NASA Tracking
14.861	"	USSR Satellite Beacon
15.008	"	USSR Satellite Beacon
18.008	"	USSR Satellite Beacon
18.060	"	USSR Satellite Beacon
19.640	"	USSR Manned Space Flight (FM)
19.954	"	USSR Manned Space Flight (FM)
19.990	"	USSR Manned Space Flight (FM)
19.995	"	USSR Manned Space Flight (FM)
20.186	"	Ascension Island Relay (NASA)
20.192	"	Ascension Island Relay
20.197	"	Ascension Island Relay
20.390	"	USAF Cape Radio/Secondary
22.760	"	USAF Cape Radio

LOG DUPING ON THE APPLE COMPUTER

THE FIRST TWO YEARS

Walt McGugan, W3FG

Alternate title:

HOW TO AVOID TAKING OUT THE GARBAGE

Not all that long ago, the "High Speed Dash" was an integral part of the goings-on at the W3LPL multi - multi station immediately following the end of a major DX contest. Being a new member of the W3LPL crew at the time, I figured everyone was in a hurry to pack up their rig and load their car so they could rush back in to hear the claimed scores on both, 2 meters and the HF gathering frequency. (In the words of APPLESOFT, Apple's name for it's BASIC Programming language, this is referred to as a LOGICAL ERROR). I soon learned from experience that the object of the "High Speed Dash" was to disappear before Frank could shove a stack of logs and a piece of paper at you and say "Dupe these!"

Being the proud owner of a new Apple //e system, I accepted the task. After all, this is the kind of thing home computers should be great at. A few lines of BASIC code, and the log could be duped in no time. No problem! (LOGICAL ERROR #2).

The way I looked at it, log duping should be a fairly straightforward process. The duping program I planned would let you type in callsigns from the keyboard. The program would then store the calls in a string array. (A string is computer talk for a variable that contains alpha-numeric data as opposed to numbers). Every so often, say every 100 QSOs or so, the program should check for dupes. I did this by comparing a callsign to each one typed in before it. This procedure turned out to be very inefficient, but easy to program. Besides, at the time I didn't know any better.

If the program found a dupe, a plus sign (+) was added at the beginning of the callsign and a message was displayed on the monitor stating where in the log the dupe was found. The callsigns were written to disk every so often to prevent all of your work from being lost if the power failed. This also meant you didn't have to type in an entire band's worth of callsigns in one sitting. After typing in all the callsigns and identifying the dupes, the file containing the calls would be sorted. The callsigns with a plus sign in front of them (the dupes) would sort to the top. Then, using a few simple lines of code to format the output text, the file would be printed to the dot matrix printer stating with the first callsign that didn't have a plus sign in front of it. This print-out would be the dupe sheet that is turned in with your contest logs.

The BASIC code for all of the above was fairly easy to write. Rather than re-invent the wheel, I searched through a few magazines looking for a sort routine. I found an article called "WONDER SORT." Sounded good to me! Before writing the full duping program, I typed in the "WONDER SORT" routine (which was written in BASIC) and tested it with 25 random callsigns. The routine sorted them in less than 2 seconds! I figured 1000 callsigns would therefore take no more than 80 seconds or so to sort. (LOGICAL ERROR #3).

After typing in my duping program, I started with the W3LPL 20 meter logs --about 1000 or so QSOs. Things ran smoothly, and fairly quickly, for the first few hundred QSOs, but started to slow down after that. My inefficient method of locating dupes needed to be changed, but for now I decided to keep going, finish typing in the last few hundred QSOs, and then let "WONDER SORT" take over so I could print out the dupe sheet.

Finally, I finished typing and the Apple had provided me with a list of the dupes. I made a short note to myself -"Re-write the dupe locating code -it is too slow." All that was left to do now was to press the RETURN key and let "WONDER SORT" do its thing. In about 80 seconds, the dupe sheet should start coming out of the printer. I pressed RETURN. My little message "STANDBY...SORTING" appeared on the monitor.

I don't remember exactly how long I sat there before deciding to go downstairs and get a beer. My estimate of the time needed by "WONDER SORT" was probably off a little. Thirty minutes later, I pressed CONTROL-RESET, stopping the program. Since "WONDER SORT" did its thing within a FOR -NEXT loop using the loop index 'I', a simple PRINT I typed in from the keyboard would show me how far through the array the sorting had progressed.

312, displays the monitor. Only about a third of the array sorted in an hour? Oh well, tomorrow is another day.

I got up a few minutes earlier than usual the next day. Before leaving for work, I started "WONDER SORT" on its way. I asked my wife to check the monitor every once in a while a make a note of when the "ALL DONE" message appeared.

My wife called me at work about 3:30 P.M. "The stupid message finally showed up sometime between 2:30 and a few minutes ago." Eight hours to sort 1000 QSOs? This was about 25 dB longer than I had estimated. I concluded something was wrong.

That evening I added a PRINT statement to the main FOR -NEXT loop in "WONDER SORT." This would give me an indication of where "WONDER SORT" was, since the main loop executed once per callsign. All set -press RETURN. Numbers scrolled down the monitor faster than I could read them. The scrolling stopped at number 61. Nothing happened for about 4 long minutes, then the scrolling started again! Then it stopped at number 86. Was the Apple resting? This went on for a while, with fewer and fewer numbers appearing between each rest. I decided not to watch this for 8 hours and turned the computer off.

When all else fails, read the book. Toward the back of the "Applesoft BASIC Programmer's Reference Manual -Volume 1," the author talks about "free space" in the computer's memory. To understand what is really happening inside the Apple, it is necessary to describe (briefly!) how memory is used. In a 64K Apple, there are actually 65,536 bytes of memory. Each memory location has an address -from 0 to 65,535. Memory locations below 2049 are generally unavailable -the Apple apparently uses this area for all types of computer

things. The same is true of memory locations above 38,399. The 36,350 remaining locations are available for you to use. Some of this is occupied by your program -the longer the program, the more memory space it occupies. The remaining space not used by the program is available for storing variables and strings used by the program.

It seems that when you change the contents of a string variable during the course of a program (say from "W3FG" to "W3LPL"), the Apple doesn't listen to you! The contents of the old string ("W3FG") are not erased from memory; the Apple simply grabs some of the remaining free space to hold the new string ("W3LPL"). The old string is flagged as "garbage" - its no longer used, but it still occupies memory! (This apparently doesn't happen when you change the contents of a numeric variable.) When the Apple detects that there is no more free space available, it goes off by itself and "throws out the garbage"! When sorting callsigns -that is, moving strings -in my duping program, the Apple was spending a lot of those 8 hours taking out the garbage.

Back to the magazines. Someone else apparently got tired of waiting for the Apple to take out the garbage and decided to write his own machine language routine to do it quicker. Just what I needed! I added the routine to my program, and started up old "WONDER SORT" again. An hour and a half later, the 1000 QSOs were sorted and the dupe sheet was done.

This was still not very impressive. A friend told me I should "compile" my program to get it to run faster -he had a compiler and would be glad to help. "Sure," I said. A few hours later I returned home with my program "compiled." It better work now -every future change to the program would require another trip to my friend's house to re-compile it.

"WONDER SORT" finished in a mere 16 minutes, which was quite an improvement over the 8 hours it took the first time. However, I still was not satisfied -I really wanted to get it down to the 80 seconds I had first estimated that it would take.

Back to the books again. A sentence near the back catches my eye: "String variables contain pointers to the contents of the strings themselves." Here was the answer. It was apparent that moving strings in Applesoft was to be avoided. But how can you sort without moving the strings? Move the pointers! Unfortunately, there is no way to do this in BASIC.

But it can be done in machine language. Another magazine article was found -this one was called "A BETTER SORTER." I had found this one in my earlier search for a sort routine, but when faced with a choice between "A BETTER SORTER" and "WONDER SORT," which one would you choose? Me too! (LOGICAL ERROR #4).

The "BETTER SORTER" was typed into my program. I tried sorting the 1000 QSOs one last time. The result: the dupe sheet was on its way to the printer in about 9 seconds. Not bad for a home computer. The dupe locating routine was also rewritten to take advantage of the faster sort. The chart below gives an indication of the present "state of the art at W3FG" for log duping. The data used for this example contains the 1470 QSOs made on 20 meters at W3LPL during the 1985 CQ DX CW contest.

ACTION	TIME REQUIRED
Load the program from disk and initialize arrays for sorting	19 seconds
Read in text file containing 1470 QSOs from disk	9 seconds
Locate dupes and send list to printer	31 seconds
Generate dupe sheet and start it on its way to the printer	20 seconds

For the total running time of 79 seconds.

Note that the actual time needed to locate the dupes and generate the dupe sheet (once the program and the callsigns are read in) is 51 seconds. By the way, the 9 seconds required to read the text file containing those 1470 callsigns comes from a machine language input routine -Applesoft BASIC is too slow! The dupe sheet itself is not completely printed in 79 seconds -I have not included the printing time, as it is a function of the printer's speed, and not the duping software.

The slowest part of the whole process remains typing in all of those callsigns in the first place. Does anyone out there have an optical reader that can read CQ WW DX logs? (PVRC)

(It will be a while before those become good and inexpensive. The solution is the real time logging/duping during the contest. - VE3BMV)

WHEN WAS THE LAST TIME I...

Andy Andersen, W3XE

The other night I overheard several hams discussing the problems of PVRC from the "Good Ole Days" to it's present state of not winning many contests. This set me to thinking about the real problems and I think I have discovered the problem. IT'S "ME." Try this on for size and see if you will agree.

Paste this to a piece of cardboard as it will need a stiff backbone. Set it up along side a mirror that you can see your pearly teeth in as well as the rest of your face. Read these questions to yourself and look in the mirror to see how you answer them.

WHEN WAS THE LAST TIME I DID MY BEST IN A MAJOR AMATEUR RADIO CONTEST?
WHEN WAS THE LAST TIME I ATTENDED A MEETING WITH THE GANG THAT WAS ROUTINE?
WHEN WAS THE LAST TIME I HELPED THE OFFICERS GET A GOOD TURN OUT FOR A CONTEST?
WHEN WAS THE LAST TIME I BROUGHT A CONTESTER TO THE CLUB AS A NEW MEMBER?
WHEN WAS THE LAST TIME I PAID MY CLUB DUES?
WHEN WAS THE LAST TIME I HELPED GET OUT THE PVRC CONTEST SPECIAL?
WHEN WAS THE LAST TIME I HONED ANOTHER HAM IN CONTEST EXPERTISE AND MADE HIM AN ACTIVE PVRC MEMBER?
WHEN WAS THE LAST TIME I HOSTED A PVRC SUMMER MEETING?
WHEN WAS THE LAST TIME I ARRANGED FOR A PVRC SPECIAL MEETING?
WHEN WAS THE LAST TIME I HELD OFFICE IN PVRC?
WHEN WAS THE LAST ITME I WROTE AN ARTICLE FOR THE NEWSLETTER?

WHEN WAS THE LAST TIME I ????

Now I have solved the problems of PVRC!

(PVRC)

1985 CQ WPX VHF CONTEST RESULTS

Steve Katz, WB2WIK, CQ Magazine

In all, we received 255 U.S./Canadian, 157 European and 86 Japanese entries, plus one entry each from CX and ZS. One would expect several close races amongst all this and there were a few. The highest and second highest scores in the world came form Europe, with multiop group F6KAW edging out the group at I4EAT/3 by 30098 points, or about 14% of F6KAW's score. Both these groups did an amazing job, with I4EAT/3 making 1004 QSOs with 182 prefixes, compared to F6KAW's 1347 QSOs with 158 prefixes. Both these world-class multiop groups were in the multiop/single-band category, operating only the 144 MHz band! F6GWV, the President of the Radio Club d'Jvry (F6KAW), sent along hilighted grid-square map of Europe to indicate what kind of DX was worked form their mountaintop QTH in JN38 (near the F/LX border). This group worked 87 grids, and at their latitude each grid is about the same size as here in the northeastern U.S. 87 grids on two meters! Running 1 kW to two pairs of 16 element F9FT beams, their DX included 15 countries, and many QSOs were made over distances of more than 1000 km.

The I4EAT/3 group didn't do too badly, either, working GJ4ICD via E skip and nearly completing a QSO with a UB5 that got away. These fellows experienced bad weather including rain and strong winds that destroyed some of their antennas, but persevered to make over 1000 contacts on two meters.

Multi/multi group DLOWW used 144 and 432 MHz to complete 465 QSOs with 167 PXs and achieved the highest European score in his category. This is one log which I'm glad we double-checked: They scored it incorrectly and had listed their score as 52150 points, when it is actually 90848! The DLOWW group of 11 operators/loggers set up operations in grid JN49, near the Rhine River, at an elevation of only 110 meters above sea level - proving, I suppose, that height isn't everything, even on VHF. Their 750 W output to 4 x 16 element F9FT array probably helped a lot.

In the single/multi QRP category, I6IQU/6 and F1FJL/p maintained a race to the finish. Using the 2 m, 70 cm and 23 cm bands, these two stations worked up nearly identical scores, with I6IQU making 137 QSOs with 68 PXs and F1FJL finishing with 151 QSOs and 51 PXs. I6IQU won the race by a mere 561 points.

GJ4ICD showed us all how it is supposed to be done by working an amazing 527 stations and 87 prefixes from his Jersey, U.K. QTH. Braving it out in the single/single class against conditions that Geoff says are "the worst I have had in 7 years of contest operating." His 45849 point score is ahead of the European pack by a wide margin. I4BXN put in a fine European second-place single/single showing by operating his two meter station to complete contacts with 293 stations and 106 prefixes, making a total 31058 points.

Other efforts worthy of note are those of I4LCK/4 who achieved the highest score in the portable class, 17484 points, using only the 70 cm band, and OK1KEI, who completed 210 QSOs with 21 prefixes using just 145 MHz FM! Congratulations, Armenghi and Petr!

In Japan, six meters was the band of choice for most of the high-scoring stations. In the single/single QRP class, JA6RJK completed 282 QSOs with 66 prefixes, edging out JO1BSM and JH7ACC/0 (244/63 and 269/56 respectively) by a comfortable margin. It is impressive that these operators worked so much with 20 Watts PEP. Who says 6 meters is dead?

Here in the U.S. the most exciting race was between single/multi stations NA1L and N8FCJ, who were both operating from mountaintops. John, W1XX, who used the NA1L call form his portable perch on Mt. Everett, MA, made 539 QSOs and 175 PXs to lead the nation with 100975 points. Right on John's heels was Dennis, N8FCJ, who set up on a favorite WV mountaintop (Spruce Knobs, Dennis? -- he didn't say) to make 491 QSOs and PXs, resulting in his 97092 point score. It is interesting to note that Dennis was leading John at 0300 UTC July 21 (the second day of the contest), but John pulled ahead just before nighttime break at 0346 UTC and he maintained a small lead from that point on. The 48 QSO lead that won the race for NA1L were contacts made on 146 MHz FM (N8FCJ didn't show any in his log). I understand that John created some excitement when he appeared on Long Island, a long distance to his south. Once again, a Northeast location proved to be superior for bulk QSOs, while Dennis' WV QTH and excellent setup (KW's on 6 and 2, plus 120 W on 70 cm) yielded more prefixes and greater DX.

The highest score in North America came from the multiop group NV6O/2, a 7 man club effort by "SCORE." Using five bands from their temporary NJ QTH, these dauntless operators worked 672 stations and 217 prefixes for a total of 170128 point score. I guess this shows that contest activity wasn't as low as some complained about. Actually, there was excellent 144 MHz tropo on Friday evening, followed by a several hour-long 50 MHz Es session Saturday, allowing NV6O/2 to pile up 257 higher one. Their 70 cm showing wasn't bad, either: 54 QSOs with 78 prefixes on the higher one.

In upstate NY, multi/multi station KX2I worked 410 stations and 166 prefixes for a fine second place national showing. I can attest to their outstanding signal on six meters, where this group of three operators made 268 QSOs (11 more than NV6O/2). An excellent score from MI was made by NN8H multi/multi netting 413 QSOs and 137 PXs.

TROPHY WINNERS

Europe:						
IW5BML	S/S	QRP	7527	GJ4ICD	S/S	45849
I6IQU/6	S/M	QRP	11628	HG1S	S/M	15936
F6KAW	M/S		212826	DLOWW	M/M	90848
OK1KEI	FM		4410	I4LCK/4	/P	17484

JAPAN:						
JA6JRK	S/S	QRP	18612	JH7VBI/7	S/S	6090
JI3BFG	S/M	QRP	6480	JA3QOS	S/M	5082
JR2ZIA	M/S		1152	JA1ZCX/1	M/M	16107
JE1KUR/1	/P		17955			

NORTH AMERICA:						
KB2HZ	S/S	QRP	4240	K9MRI	S/S	16320
AB1U	S/M	WRP	5510	NA1L	S/M	100975
KU4V	M/S		23496	NV6O/2	M/M	170128
KT3M	FM		7105	W00ZL	/P	21408

Results of the European DX Contest (WAEDC) 1985 CW

Continental Winner

Single Operator

Europe	YZ9A
Asia	UH8EA
North America	K1ZM
South America	LU8DQ
Oceania	VK2APK

Multi Operator

Europe	DL6FBL
Africa	EA9CE
Asia	RFØFWW
North America	K1AR
South America	CX8BBH

Top Ten Single Operator

		QSOs					QTCs		Multiplier					
Europe	**Score**	**80**	**40**	**20**	**15**	**10**	**all**		**80**	**40**	**20**	**15**	**10**	**all**
YZ9A	1432200	75	321	495	101	3	995	1051	152	264	194	84	6	700
DK3GI	1387188	84	199	614	51	1	943	1091	148	234	218	80	2	682
UP2NK	918272	71	255	375	45	2	748	940	112	210	168	52	4	544
IK2DVG	885630	42	188	501	70	3	804	867	108	189	164	74	4	530
DF7YE	831390	90	183	440	6	0	719	835	156	201	170	8	0	535
UA6LV	754883	37	161	388	68	7	661	766	96	195	176	52	10	529
YU7AV	745476	37	101	455	58	5	656	1023	96	132	160	46	10	444
UA1DZ	734048	45	131	450	56	0	682	900	104	152	166	42	0	464
UB5ZAL	712920	58	94	432	22	3	609	951	124	123	170	34	6	457
OK6RA	711648	59	85	423	46	0	613	789	128	132	178	62	0	500
Non-Europe														
UH8EA	1164267	198	446	560	233	8	1445	1444	132	111	78	64	16	403
UA9SA	1053090	243	352	565	182	9	1351	1350	136	108	80	54	12	390
K1ZM	819868	176	338	723	12	1	1250	1242	120	111	78	18	2	329
K1GQ	775530	127	374	680	56	0	1237	1225	100	111	78	26	0	315
LU8DQ	727750	118	238	388	246	39	1029	1021	100	87	68	64	36	355
UA9WEE	721215	209	310	518	35	2	1074	1041	128	105	78	26	4	341
UH8DC	702856	183	292	578	38	0	1091	1065	124	96	80	26	0	326
K1RX	662501	153	266	639	43	0	1101	1100	116	87	74	24	0	301
UW9CO	653625	249	187	577	32	0	1045	1030	124	93	72	26	0	315
UL7BY	651360	212	188	526	31	0	957	931	118	90	43	24	0	345

Top Six Multi Operator/Single Transmitter

Europe													
DL6FBL	2133330	135	225	734	105	4	1203	1500	224	255	210	102	8	799
UP1BZZ	1899018	59	258	668	71	10	1086	1416	172	261	216	90	20	759
LZ2KTS	1822260	100	258	853	202	11	1424	1074	200	219	204	108	22	753
HG5A	1581932	63	230	720	111	8	1133	1386	152	192	194	76	14	628
UP1BWW	1525860	62	331	422	43	10	868	1337	124	282	196	70	20	692
UZ2FWA	1345348	85	235	735	97	7	1159	963	156	216	190	58	14	634
Non-Europe														
EA9CE	1526742	286	348	699	339	143	1815	1647	140	111	78	64	48	441
EA8AGD	1470974	255	358	722	370	96	1801	1693	136	105	76	68	36	421
RFØFWW	1387680	279	386	751	213	28	1657	1647	132	108	84	66	30	420
UZ9AYA	1184220	209	450	767	103	2	1535	1525	132	117	82	52	4	387
UL8LWO	971665	206	367	547	188	0	1308	1297	124	111	82	56	0	373
UZ9FWR	908950	185	407	565	84	10	1251	1189	124	105	76	46	20	371

Single Operator Category

North America

HI - Dominican Rep.

HIØA	6952	80	78	44

HP - Panama

HP1AC	8911	70	66	67

TI - Costa Rica

TIØRC	15604	98	90	83

VE - Canada

XO1AW	128128	359	345	182
VE3ST	27126	139	135	99
VA1CBF	2318	31	30	38
VE3PEH	660	30	0	22

W/K - USA

K1ZM	819868	1250	1242	329
K1GQ	775530	1237	1225	315
K1RX (opr. KZ2S)	662501	1101	1100	301
W3GM	368970	885	872	210
K1XM	229835	540	529	215
K3WW	196474	509	509	193
WC4E	124696	447	425	143
W1PH	118560	371	370	160
W9RE	105000	350	350	150
K5KLA	84455	318	317	133
W4BV	68391	227	220	153
K2POF	66204	251	251	132
KQ1F	50830	224	218	115
N6AV/4	47060	185	177	130
K5NW	45360	214	206	108
KW2J	42000	204	196	105
N8BC	41856	218	218	96
W3ARK	41208	210	198	101
K4BAI	30960	181	179	86
K2LE	28830	155	155	93
N6ND	25066	152	150	83
KE9U	24820	146	146	85
KT1O	20970	119	114	90
KEØY	18422	152	150	61
KD2HE	17658	110	108	81
W4YN	14328	101	98	72
W6BIP	13158	129	129	51
W2DW	13158	79	74	86
K4FPF	10854	101	100	54
W5FO	10464	109	109	48
K6EID	10176	96	96	53
W1KQ	9585	72	63	71
W2GKZ	8802	82	81	54
N6EK/1	7070	101	0	70
W9AG	6174	63	63	49
NGØT	5628	74	60	42
W4KMS	4692	69	0	69
K4FW/8	3519	69	0	51
K2PF	3358	58	15	46
W5EU	3239	41	38	41
W4KO	3180	54	52	30
W4KM	2212	40	39	28
AC8W	2178	36	30	33
KC1F	2145	28	27	39
NE4I	2091	51	0	41
K7LXC	1768	36	32	26
W1CNU	1650	55	0	30
KA4QVF	1482	45	12	26
W1OPJ	858	31	2	26
K6VL	810	24	21	18
N6AW/m	612	21	13	18
KA7FEF	352	16	0	22
WA7KLK	336	21	0	16
W5NR	256	16	0	16

South America

CE - Chile

CE1IDM	8460	94	0	90

HK - Colombia

HK1BAU	28380	129	129	110

LU - Argentina

LU8DQ	727750	1029	1021	355
LU1EWL	29952	167	145	96

PY - Brazil

PY2RRG	57728	239	212	128
PY1DHG	42772	161	128	148
PT2ACZ	25280	159	156	82
PY2FFW	11782	137	0	86
PY2LQB	4176	49	38	48
PI5PVI	2960	40	0	74
PY2RLQ	988	38	0	26
PY4WAS/PU8	140	10	0	14

Asia

JA - Japan

JA5EGX	131024	431	431	152
JK1OPL	119140	403	402	148
JA6BIF	101935	354	349	145
JH7WKQ	72900	270	270	135
JH3AIU	67232	385	379	88
JE4VVM	54891	257	256	107
JA0GCJ	45786	303	284	78
JA1BNW	40744	233	230	88
JR3BOT	38885	198	187	101
JA6LDD	28180	241	40	100
JA7GAX	20416	116	116	88
JAØCVC	14592	170	22	76
JA3ARM	9620	97	88	52
JA2MYA	6118	81	80	38
JA1DFQ	5964	79	63	42
JA2BJC	4712	64	60	38
JM1WZP	1536	29	19	32
JG3EHD	1464	44	17	24
JO1QZI	1196	36	10	26
JK1RJQ	957	19	10	33
JE1ARQ	768	24	0	32
JA1OYB	624	26	0	24
JA2SAP/1	540	18	12	18
JA1AAT	476	17	0	28
JA3BCT	180	10	0	18
JH1NHY	70	7	0	10
JA2KPV	24	4	0	6

Multi Operator Category

North America

W/K - USA

K1AR	353481	754	725	239
N2WK	55920	233	233	120
W3AKD/3	15336	108	105	72

VE - Canada

VE3HQV	4617	73	8	57

South America

CX - Uruguay

CX8BBH	293280	524	516	282

Asia

JA - Japan

JE2YRD	386236	871	865	223
JA9YBA	89815	392	389	115
JA1YCL	65224	528	524	62
JA1YAD	43239	253	244	87
JA3YBA	39188	199	189	101

SWL CW WAEDC 1985

10.-11.08.1985
(Call, QSO, QTC, Multi, Score)

Sektion 3: Single Op

DJ1SV	546	709	540	677.700
DF1LX	509	703	516	625.392
ONL-383	460	332	449	355.608
DL8FBP	296	589	316	279.660
DE2XZX	267	327	434	257.796
DJ7ST	282	342	374	233.376
DL4LN	335	136	462	217.602
DL5EY	328	313	311	199.351
DL1SBR	243	356	304	182.096
REF 42901	387	0	292	113.004
DE2OYA	190	184	250	93.500

Sektion 4: Multi Op

DEØQVL	839	878	634	1.088.578
DEØQWW	595	507	632	696.464
DE5BAW	512	389	710	639.710
DE[illegible]FA	394	642	303	313.908
DE1FSM	227	259	259	126.292
DEØQHE	156	130	195	55.770
DE8QSL	6	0	18	108
DL1BFW	3	0	9	27
DL1BDA	3	0	8	24
DL6BAK	2	0	8	16
DL2BAY	2	0	4	8

Chuck Clark, K4ZN

TRAFFIC EMERGENCY

Blue-Ribbon Committee

The ARRL Board meeting in January directed that a "Blue-Ribbon Committee" be chosen to study and make recommendations as to methods of handling traffic overloads during an emergency, with Thomas W. Comstock, N5TC, acting as the chairman. What this committee will do and who will be its members remains to be seen. I am sure that the committee will be grateful for any input that it receives from amateurs who have participated in emergency communications, in particular if they can make concrete recommendations that will improve our performance. Those actually involved in the work are the ones more likely to have practical ideas for improvement. Sitting behind a desk may confer authority, but look elsewhere for wisdom.

Traffic handlers may note that Mary Lewis, W7QGP, tried valiantly to restore the policy of sending copies of the ARRL Net Directory without charge, but in vain. She made motions every chance she had, motions of her own, amendments to motions on the floor, but none passed. Sorry you were not able to swing it, Mary, but thanks for trying. However, the dollar charge is not that steep. It is not much more than what the SASE plus postage for mailing it to Newington would cost. Also, ARRL gets some of the money, it does not all go to the Postal Service. This directory is more than just a list of nets. It also contains much other information useful for traffic handlers new and old. Send ARRL your buck and get a copy if you are interested in traffic handling.

Packet Repeaters

The FCC giveth and the FCC taketh away. The Report and Order in PR Docket 85-105 allows amateurs to program their stations for automatic transmission and reception of digital communications, verifying receipts of messages and responding to inquires. Great! Just what we need for a speedy, efficient, round-the-clock traffic system. But wait. The FCC added an afterthought which said that this does not apply to stations handling third-party traffic by digital modes will still need to have a control operator.

So what good is the permission if you cannot use it? You do not need permission for automatic operation when a control operator is present. That holds for any mode, digital or otherwise. About the only thing it will allow that we cannot do already is to send a message (our own, not something from a third party) to another amateur when no operator is at the operating position. It will be recorded automatically, its accuracy confirmed and receipt acknowledged. The only thing about this procedure that required any special action by the FCC is the fact that the receiving station has to transmit that acknowledgment without an operator present.

One wonders what the Commission was thinking of when it made this rule. There hardly seems to be any real necessity to have control operators at every station operating in an automatic mode. It would seem that the necessary control of communications could be handled by the control operator of the station putting the traffic into the system. Actually, other control operators would have nothing essential to do and ARRL seems to agree. The Board of Directors directed that steps be taken to change this. What will happen remains to be seen.

Control operators are required at a station for two purposes: 1. to insure that the station operates in accord with the technical requirements of the rules (proper frequency, power, clean signals); 2. to insure that the contents of the communication are in accord with the rules. There is nothing special about third-party communications that relates to the first purpose. It is the control operator of the originating stations who is responsible for the second. This operator is in a position to discuss the contents of the communication with the person on whose behalf the message is being sent, to suggest changes where appropriate, and to refuse the message with an explanation as to why such a message cannot be sent by Amateur Radio. Other operators down the line have only the message itself and so are not in as good a position to take such action.

On MARS circuits, the rule is that all stations relay any traffic received. Once traffic is in the system no further judgment is made about its being in accord with the rules. Any operator who thinks a particular message is improper, is directed to send a service message to the originating station. In more serious cases, he is required to refer the matter "upstairs" through channels. This is something we would not do in the Amateur Service unless it were really serious, something that called for action by the FBI or FCC for example.

Unfortunately, no opportunity was given for comment on this question of third-party traffic, as no mention was made of it in the Notice of Proposed Rulemaking. The FCC can say that no such notice was necessary because the requirement for a control operator was already there.

It is regrettable that this restriction exists, particularly for emergency communications. One problem we amateurs face is that we are not on the air at all times. Therefore, it can be hard to find someone to help when the need is urgent. With a packet system and digital repeaters it would be possible to send messages anywhere, any time, with 100 percent accuracy and have them delivered in a matter of seconds, or at least of minutes.

I do not think the FCC would object if we were to make an exception in an emergency. Even though it is not spelled out in the rules, third-party

traffic should be handled through an automatically controlled station. Actually, that would not be much help. To be effective, such a system would have to be in regular operation, debugged and with operators experienced in handling traffic by this mode. That is something that actual emergency operating proves time after time. It is the system and the operators that operate regularly who get the job done. There is no substitute for actual experience.

But Maybe...

I have not seen the text yet, but if no change is made in the rules for repeaters, this action of the FCC may not be as bad as it sounds. We have been using repeaters right along to handle third-party traffic, ever since the FCC liberalized the repeater rules. The general rule is that a control operator must be present whenever an amateur station is operated except when a station is operated by automatic control, as specifically permitted by the rules (97.79(b)). Automatic control is permitted for stations in repeater operation (97.85(e)), and now for any station using digital modes above 50 MHz, except when handling third-party traffic. It would seem therefore, that a digital repeater could be operated under automatic control while handling third-party traffic. Not because it is digital but because it is a repeater.

So, maybe all is not lost. Maybe we should not bother the FCC with petitions to change things, but just go ahead and make full use of the rules we already have. Actually the only place that the third-party restriction would affect us is when a message has to go through a repeater and automatic control is already permitted in this case. So let us just go ahead and get our packet systems running. (K4ZN)

TIME BEACONS

Kurt Torgerson, KL7BGE

Interested in knowing the correct time? Most of us are familiar with the standard time and frequency stations WWV and JJY, and can listen to one or the other during any part of the day or night (except, perhaps, following a major solar eruption as happend last week).

But, how about using time beacons as propagation beacons of sorts? Besides stations WWV and JJY, there are many other time stations which give a rough indication of propagation paths to different areas of the world. You should be aware that some of these stations run rather high power while others have apparently sporadic operating schedules. Look for signals on the following frequencies:

WWV Ft. Collins, Colorado - 2.5, 5, 10. 15, 20 MHz
WWVH Maui, Hawaii - 2.5, 5, 10, 15 MHz
JJY Tokyo, Japan - 2.5, 5, 8, 10, 15 MHz
CHU Ottawa, Canada - 3.33, 7.335, 14.670 MHz
VNG Lundhurst, Australia - 5.425, 7.515, 12.005 MHz
OLB5 Czechoslovakia - 3.170 MHz
VWC Calcutta, India - 12.744 MHz
DAO German Hydro Inst., Germany - 2.775, 12.763 MHz
(via Westlink Report)

EL2CD FROM LIBERIA

I thought you might like a picture of real rare African station to spice up *RADIOSPORTING*. Hi Really, it's yours truly KE9A as EL2CD visiting the shack of Ed, EL2ED. My trip also took me to ON, 9Q5, TJ, 5Z4.

I didn't get a chance to operate from TJ but sure tried. Some local had a TH6 at about 70 ft right up the street from the embassy, so I took a interpreter up there and it turned out he was out of the country. I never have found out what his call was. Maybe next time. I hope to be able to go back to EL within a couple of years. Because I travel a lot now and also trying to raise a family I have very little time to operate radio anymore, but at least I can keep in touch with *RADIOSPORTING*. Some day I will return in full force. QSL cards for EL2CD operation can be obtained via my home address:
Ken Claerbout, KE9A, Star Rt.1, Box 16, Remington, VA 22734

Juan Gomila, EA6DD, ex EA3EG is one of the real old timers - he is 83. Juan uses home brewed rig: Xtal controlled Tritet oscillator 6V6, 815 buffer, and the final is the Eimac pentode 8295A with forced air cooling, running at about one third of full capacity using 1700 V and 550 mA on the plate. Juan usualy operates only two hours daily from 04 to 06 GMT. Can you spot your QSL card on the wall? We wish Juan many more active years! (Tnx W6OKX)

HURRICANE ELENA
SOME VALUABLE LESSONS

Al Elmore, WA4RGO

Once again, we have been blessed in Duval County as another destructive hurricane passed us by. High waters and a little excitement are about all we have to remember about this multi-million dollar nightmare. No doubt about one thing, Elena taught us some very valuable lessons. Here are just a few off of the top of my head.

1. We learned that... Amateur radio was ready to handle what ever came our way.

2. We learned that... Net "Check-Ins" were abundant at all hours of the day and/or night. Comforting to know you were there!

3. We learned that... Hams like WD4NYT and N4KQK were ready to go out of county to serve the Red Cross in the time of need (they stayed overnight in Lake Butler). N4JBK in Stark as a shelter manager for ARC.

4. We learned that... Others were willing to assist Clay County EC Russ Oder, N4KOX, in filling several shifts in their shelters. The mutual aid plan was at work.

5. We learned that... Volunteers from a list of over 75 Check-Ins were requested for help but only two responded. Only later, after we learned that most of them were out making provisions for their own families, did we realize that were ready all the time as they later checked in with the Net Control and volunteered their help.

6. We learned that... We are still very much appreciated by the Red Cross, NOAA Weather Service, the Fire Department and several other agencies whom we served during the emergency.

We pretty well knew all of those things. After all, Jacksonville hams have had a lot of experience in this type of emergency over the past years and have always excelled. Now let's talk about some of the things we learned, for the first time from Elena.

1. We learned that... Jack, KB4B, Wayne, N4KWC, Steve, WA4B and Tom, KA4YAY, simply cannot report for duty all at one time in the Emergency Communications Center (EEC) Radio Room at ARC unless we remove all of the equipment form the room first!

2. We learned that... We have a great need for a roster system that will give us the names and nd phone numbers of hams in given areas for immediate call up. We will be solving that problem soon with an inexpensive Commodore-64.

3. We learned that... We have a need for a more readily available and complete list of frequencies, VHF and HF, which can and will be used during emergencies in and out of county. We will solve that one also with the Commodore-64.

4. We learned that... Packet radio has a place in our future plans for emergency communication. Thanks to the efforts of KB4B, we were on the air and he has received enthusiastic response from others in Florida using Packet. It created a even more active interest statewide.

5. We learned that... We have the need for more reliable equipment in the EEC especially, as some of our present equipment either failed while in use or lacked the stability necessary for satisfactory operation.

6. We learned that... We have a need for a stacked eleven element beam on top of our new 100 foot tower to be, to reach the outlying areas. Out N.E. Florida Red Cross Chapter is responsible for eight counties including Duval, but was assigned a total of 23 by National before it was all over. The new tower and beams will be going up within four or five weeks to resolve this need.

7. We learned that... Civil Defense Directors in many surrounding counties at last, have gained a healthy respect for the capabilities of ham radio and ham radio operators. There has been a great turn-around on their part since Elena. One time during the storm, when power failed, the only radio communications from the Clay County CD Office was ham radio.

Now, to add to the last "We learned" but, this one will be entitled "I learned".

1. I learned that... It is difficult to back off and watch your assistant EC work so hard when you feel you are supposed to be the EC, and get the job done. Well, I learned that in their given area, they know their job far better that I and will do that job to perfection if left alone. That's what a team effort is all about, isn't it? this is my opportunity to thank KB4B, KA5YAY, N4UF and N4BZH for a super job in handling their assigned areas of responsibility. I should be the proudest guy around - and I am. Thanks also to John, WB4GSQ, for keeping the NOAA Weather Station at Jax International manned during the storm. another thanks goes to Steve, WA4B, for coming out to shoot some slides for our promotion film.

2. I learned that... Hams who we have not heard from for years, or never heard form before in your life, will come out of hiding and be ready to assist. That is most reassuring to any EC.

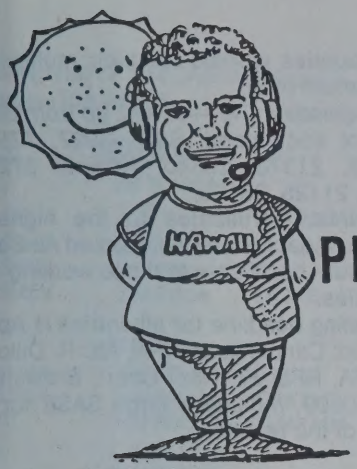
3. I learned that... There has not been one wasted night to practice with the Florida Crown Emergency Net and that it all comes together just as we expected it would, when the need is there.

4. I learned that... It is difficult to express enough thanks to all of you for your valued support and encouraging remarks when the hours begin to stretch out. In time of emergency, everyone is a hero for what ever you contributed and my thanks go out to you.

We have some great plans for ARES in Duval County and for the Red Cross Communication System for the eight counties we serve - some exciting plans that will require new equipment, more and better radios, repeater linking, packet radio and two meter ground plane antennas on top of every major center in the area that might be utilized in an emergency where other communications may fail. We are talking about a telephone in the name of ham radio to be shared in operation and expense by the are clubs and ARES in order to serve the public better. I am putting together an ARES film presentation with the help of WA4B, to be shown to any group: civic clubs, churches, civil defense directors, county commissioners, financial contributors and so on. All it takes is time and money. I promise to get the money if you will give the time. Looks like we are doing pretty well in both areas so far.

There is a lot happening in ARES. It is happening simply because you are making it happen! Ham radio in Jacksonville is coming to the attention of the public more every day. Talk it up. Tell people about it. ARRL has published a new booklet called "Amateur Radio a National Resource."

Elena, thanks for bringing all of us closer together. Thanks for not getting any closer and tearing us apart!! (NFARS, Balanced Modulator)



KH6BZF PROPAGATION REPORT

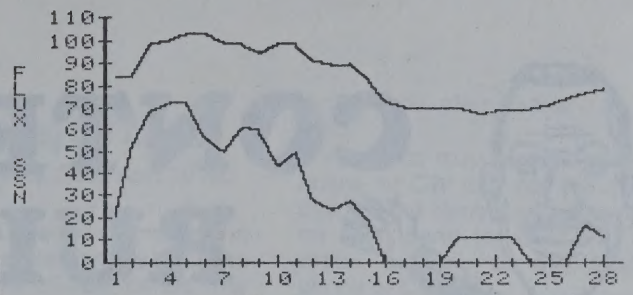
Lee Wical, KH6BZF

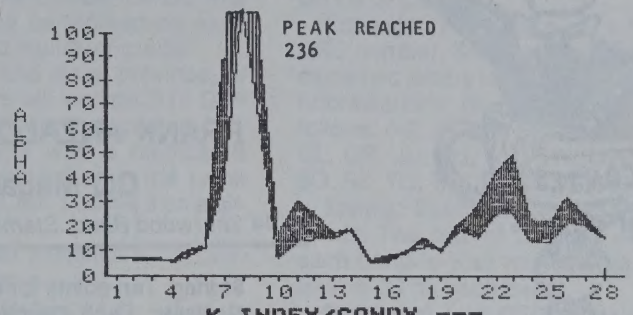
Statistical information is compiled by KH6BZF and processed on a computer by VE3BMV.

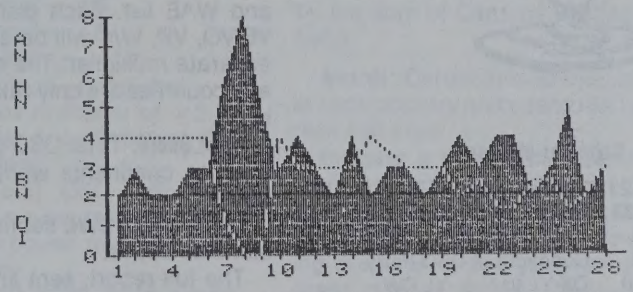
The first diagram shows the value of solar flux (top curve) and SSN - sunspot number (bottom curve). The Y axis and scale is the same for both. The X axis is calibrated in days of the month.

The second diagram shows variation of the Alpha Index for each day. The dark shaded area shows increases, while the white area shows decreases in the value of the Alpha Index for each day.

The third diagram shows the value of the K Index (shaded area) on a scale from 0 to 6. The dotted line represents the propagation quality where the scale is: from 5 = Above Normal to 1 = Disturbed.







FEBRUARY 1986

FORECAST:

BEST HF CONDX: MAR: 28 - 30, APR: 26-27

BEST VHF CONDX: APR: 5-7, 21 - 22

FEB '86	CONDX	SOL FLUX LEVEL	SSN#	GEOMAGNETIC LEVEL	ALPHA INDEX	K INDX	NOTES
01	HN	084 VY LOW	21	QUIET	07/07	K=2	RGN 4711(11) S07, E57
02	HN	084 VY LOW	52	QUIET-UNSETTLED	06/07	K=3	RGN 4711(24) S07, E38; 4712(8) S05, W46
03	HN	099 MOD	69	QUIET-UNSETTLED	06/07	K=2	RGN 4711(27) S07, E24; 4712(22) S05, W60
04	AN	101 MOD-	73	QUIET	05/05	K=2	RGN 4711(31) S07, E10
	HIGH MAJOR FLARES: X3/3B@04/0735 UTC						RGN 4712(07) S04, W73
	M6/1B@04/1018 UTC B9/SF@04/1720 UTC						RGN 4713(05) S02, E54
05	HN	103 MOD	73	QUIET-UNSETTLED	08/10	K=3	RGN 4711(28) S07, W02
	(PEAK)	RGN 4712 WILL ROTATE OFF WEST LIMB.					RGN 4712(04) S05, W90; 4713(11) S02, E43
06	HN	103 MOD-	56	UNSETTLED	12/12	K=3	RGN 4711(27) S08, W15
	HIGH	A PROTON EVENT @06/0900 UTC (BEGAN)					RGN 4713(09) S02, E28
07	DIS	099 MOD-	50	MINOR STORM LVLS	38/89	K=6	RGN 4711(25) S08, W29 PROTON EVENT
	VY HIGH	MAJOR FLARE: M5/2B@07/1034Z(RGN 4711)					RGN 4713(13) S02, E15 STILL IN PROGRESS.
08	VY VY DIS	098 VY HIGH	61	MAJOR STORM (VERY LARGE AREA)	110/236	K=8	RGN 4711(22) S08, W42
							RGN 4713(19) S01, E01
09	VY DIS	095 HIGH MOD	59	MAJ-M.S. LVLS	65/098	K=5	RGN 4711(14) S08, W57; 4713(25) S01, E01
10	HN	099 LOW	44	UNSETTLED	07/17	K=3	RGN 4711(03) S08, W70; 4713(21) S01, W28
11	LN	098 MOD	50	UNSETTLED	14/30	K=4	RGN 4711(01) S08, W84; 4713(29) S01, W44
	MAJOR FLARES: M1/1B@11/0341; C5/SF@11/0440; C9/SF@11/0900 UTC						
12	LN	091 LOW	28	UNSETTLED	15/25	K=3	RGN 4711(01) OVER W LIMB 4713(27) S01,W60
13	LN	089 LOW	23	UNSETTLED-ACTIVE	15/17	K=2	RGN 4713(13) S01, W73
14	LN	090 MOD	28	ACTIVE	19/19	K=4	RGN 4713(18) S01, W88
15	HN	082 MOD-LOW	18	UNSETTLED-ACTIVE	05/06	K=2	RGN 4713(08) OVER W LIMB
16	HN-LN	073 VY LOW	00	QUIET-UNSETTLED	05/08	K=3	NO SUNSPOTS
17	LN	070 VY LOW	00	QUIET-UNSETTLED	10/09	K=3	NO SPOTS PRO EVNT IN PROG STRATWARM ALRT
18	LN	070 VY LOW	00	QUIET-UNSETTLED	12/15	K=2	NO SPOTS STRATWARM PRO EVNT/PCA, DEMINISH
19	LN	070 VY LOW	00	ACTIVE-UNSETTLED	10/09	K=3	NO SPOTS
20	BN	070 VY LOW	11	ACTIVE	18/21	K=4	RGN 4714(1) S02, E67
21	LN-BN	067 VY LOW	11	UNSETTLED-ACTIVE	15/28	K=3	RGN 4714(1) S01, E56
22	BN-DIS	069 VY LOW	11	ACTIVE-M.S.LVLS	25/42	K=4	RGN 4714(1) S01, E41
23	BN-DIS	069 VY LOW	11	ACTIVE-M.S.LVLS	25/49	K=4	RGN 4714(1) S01, E26
24	LN-BN	070 VY LOW	00	UNSET-ACT-M.S.LVLS	13/22	K=2	RGN 4714(0) S01, E13
25	LN-BN	072 VY LOW	00	UNSETTLED-ACTIVE	14/21	K=3	RGN 4714(0) S01, E0
26	BN-DIS	074 VY LOW	00	UNSETTLED-ACTIVE	21/32	K=5	RGN 4716(FORMING) N02, W05
27	BN	017 VY LOW	16	ACTIVE-M.S.LVLS	20/24	K=2	RGN 4716(6) N02, W18
28	LN	079 VY LOW	11	UNSET-ACT-M.S.LVLS	15/--	K=3	RGN 4717 S00, E87 (OLD 4713)

CONTEST RULES

FRANK ANZALONE, W1WY

CQ Magazine

14 Sherwood Road, Stamford, CT 06905

Calendar of Events

	Mar.	22-23	Tennessee QSO Party
*	**Mar.**	**29-30**	**CQ WW WPX SSB Contest**
	Apr.	5-6	GARTG SSTV Contest
	Apr.	5-6	Connecticut QSO Party
	Apr.	9-10	DX-YL to N.A.-YL CW
	Apr.	12-13	IBM QSO Party
	Apr.	12-13	North American QSO Party
	Apr.	16-17	DX-YL to N.A.-YL SSB
	Apr.	19-20	ARCI QRP Spring CW
	Apr.	26-27	Swiss Helvetia Contest
	May	3-4	County Hunters SSB Contest
	May	3-4	"Armadillo Run"
	May	3-4	Florida QSO Party
	May	4	DARC "Corona" 10M RTTY
	May	10-11	USSR "CQ-M" Contest
	May	10-11	New York State QSO Party
	May	17-18	ARI International Contest
	May	17-18	Michigan QSO Party
	May	**24-25**	**CQ WW WPX CW Contest**
	May	27-28	CLARA AC/DC "Mystery"
	My 31	-Jun 1	National 6 Meter Contest
	June	7-8	ARRL VHF QSO Party
	June	28-29	ARRL Field Day
	July	12-13	IARU Radiosport
	July	**19-20**	**CQ VHF WPX Contest**

* *See January CQ.*

GARTG SSTV Contest

0000–0800 & 1600–2400Z Sat., April 5
0800–1600Z Sun., April 6

This is the seventh worldwide SSTV contest sponsored by the German Amateur Radio Teleprinter Group. Use all bands, 3.5–28 MHz, in that portion of the bands used for SSTV. Exchange must be made in the SSTV mode exclusively.

Exchange: Callsign, RST, and message number. GARTG members will include their 5-figure membership number. Add 50 bonus points for each member worked.

Scoring: Ten points for each contact.

Multiplier: Each country of the ARRL and WAE list. Each district in JA, PY, VE/VO, VK, W/K will be considered as a separate multiplier. The same continent and countries are only valid once on each band.

Final Score: Total QSO points × countries × continents worked plus bonus points.

There is an SWL section with scoring same as above.

The full report, sent and received, by the station logged must be shown.

Awards: A year's subscription to *RTTY*, the official organ of the GARTG, to the three top scorers in each group.

Use a separate log sheet for each band and a summary sheet showing the scoring, etc. Logs must be received no later than two months after the end of the contest. They go to: Wolfgang Punjer, DL8VX, P.O. Box 90 11 30, D-2100 Hamburg 90, Federal Rep. of Germany.

Connecticut QSO Party

2000Z Sat. to 0500Z Sun., April 5–6
1200Z Sun. to 2000Z Sun., April 6
Rest Period: 0500Z to 1200Z

The Candlewood ARA is again sponsoring this year's party. Rules the same as those used in previous years, but with a change in operating times.

The same station may be worked on each band and each mode for QSO points. DX stations count for QSO points, but for only one multiplier.

Exchange: RS(T), QSO number, and QTH. County for CT stations, ARRL section for others.

Scoring: One point per contact, 2 points if it's with a Novice, 3 points for Oscar contacts, and 5 points if you work W1QI, the club station.

CT stations multiply total QSO points by ARRL sections, plus one DX station worked for their final score. Others use CT counties worked for their multiplier (maximum of 8).

Frequencies: CW—40 kHz up from bottom of each band. SSB—3927, 7250, 14295, 21370, 28540. Novice: 3725, 7125, 21125, 28125.

Awards: Certificates to the highest scorer in each state. A "Worked All Connecticut" certificate to those working all counties.

Mailing deadline for all entries is April 30th to: Candlewood ARA, Att: R. Dillon, N2EFA, RFD #7, Noel Court, Brewster, NY 10509. Include a large SASE for a copy of the results.

DX-YL to N.A.-YL Contest

CW: April 9–10 SSB: April 16–17
1800Z Wednesday to 1800Z Thursday

This is strictly a YL affair in which DX YL's will be contacting YL's on the North American continent. (KH6 and KL7 are considered DX.)

All bands may be used. However, cross-band, Nets, repeaters, or contacts with OM's do not count. The same station may be worked on each band and mode for QSO credit. Phone and CW are separate contests and require separate logs.

Exchange: QSO no., RS(T), and state province, or country.

Scoring: One point per contact. Your multiplier is determined by the number of states, VE provinces, and DX countries worked. Counted once only, not once on each band.

There is a power multiplier of 1.25 for stations using 150 watts or less on CW, 300 watts PEP on SSB.

Final Score: Total QSO points times (states + provinces + countries) × power multiplier if any.

There is a penalty for each duplicate contact removed from the log by the Contest Committee of three additional and equal contacts.

Frequencies: CW—3555, 7055, 14055, 21195, 28195. SSB—3955, 7255, 14295, 21395, 28595 (plus or minus 15 kHz).

Awards: Four Cups will be awarded to the 1st place winners, DX and N.A., on both phone and CW. And two Plaques to the highest combined CW/phone scores for DX and N.A. Certificates to the 2nd and 3rd place DX and N.A. winners.

Submit separate logs for each contest. Include a summary sheet showing the scoring, transmitter power, and other essential information. The usual signed declaration is also requested.

Entries must be postmarked no later than May 5th and received no later than May 28th. This year they go to: Mary Lou

Brown, NM7N, 504 Channel View Dr., Anacortes, WA 98221.

1985 Results

CW Winners

NA		DX
WD4NKP	Gold Cup	CT1YN
VE1BWP	2nd Place	I2KYM
WD8MEV	3rd Place	VK3KS

SSB Winners

WD4NKP	Gold Cup	DJ0EK
WD5FQX	2nd Place	IO2KYM
KM8E	3rd Place	GM4YMM

CW and SSB

WD4NKP	I2KYM

IBM QSO Party

0000Z Sat. to 2400Z Sun., April 12–13

This contest is open to present, retired, and immediate family member employees of the IBM Corp. Competition is worldwide, but for single operator stations only. The same station may be worked on each band and mode for QSO credit. Competing stations will call "CQ IBM."

Exchange: RS(T), QSO no. and IBM division, and location. (Retirees use "retired" for their division.)

Scoring: One point per QSO with same country, 3 points with another country in same continent, 5 points with another continent.

Multiplier: Determined by number of different countries and USA areas worked. US is divided into 4 areas: (1) W1, W2, W3. (2) W4, W5. (3) W6, W7. (4) W8, W9, W0.

Frequencies: CW—3560, 7030, 14060, 21060, 28060, SSB—3760, 3892, 7060, 7260, 14260, 21310, 28560, plus or minus 10 kHz.

Awards: Diplomas to first three winners in each category and area. Plaques to first-place winners in each category and area. A super plaque to the overall top scorer. Special QSL card to all who submit a log. (Three categories: CW, SSB, and Mixed. Three areas: USA, Europe, and other overseas areas.)

Mailing deadline is May 15th. North American entries go to: Roger R. Root, KC7LZ, 6851 N. Skyway Drive, Tucson, AZ 85718. All other countries' entries go to: J. Motte, F6HMJ, 1185 Route de La Colle, 06570 Saint-Paul, France. It is recommended that you write to one of those people for more detailed rules.

ARCI QRP Spring CW Contest

1200Z Sat. to 2400Z Sun., Apr. 19–20

Participation is open to members and nonmembers. Operating time is limited to 24 hours out of the 36-hour period. The same station may be worked on each band for QSO and multiplier credit.

Exchange: RST and state, province, or country. Members will include their QRP number; non-members their power.

Scoring: Contacts with a member 5 points, with a nonmember in the same continent 2 points, but 4 points if on a different continent.

There is a power multiplier as follows:

4 to 5 watts output—× 2
3 to 4 watts output—× 4
2 to 3 watts output—× 6
1 to 2 watts output—× 8
Less than 1 watt out—× 10
Over 5 watts output—check log.

There is a bonus multiplier of × 2 for stations using solar or wind power. And × 1.5 if using battery.

Final Score: Total QSO points × (states + provinces + countries) worked on each band, × power multiplier × bonus multiplier if any.

Frequencies: 1810, 3560, 7040, 14060, 21060, 28060, 50360. Novice: 3710, 7110, 21110, 28110.

Awards: Certificates to the highest scorers in each state, province, and country with two or more entries. Scores will be credited for the annual "Triple Crown" QRP award. Also a special certificate from Adrian Weiss, W0RSP, to stations using less than 1 watt.

Use a separate log sheet for each band and a summary sheet showing the scoring and other essential information. Scoring sheets are available from KA5NLY. Include a large SASE with your request. Include an SASE if you desire results of contest.

Logs must be received no later than a month after the end of the contest and go to: QRP ARCI Contest Chairman, Eugene Smith, KA5NLY, P.O. Box 55010, Little Rock, AR 72225.

Swiss Helvetia Contest

1300Z Sat. to 1300Z Sun., Apr. 26–27

The Swiss usually try to activate some of the rare Cantons, so this offers a good opportunity to build up your totals for the attractive Helvetia Award. Confirmation of all 26 Cantons is required. Only contacts made after January 1, 1979 are valid.

All bands may be used, 1.8–28 MHz, phone or CW (but not the new WARC bands). The same station may be worked on each band for QSO and multiplier credit, but only on one mode, either phone or CW.

Exchange: RS(T) plus a three-figure QSO number. Swiss stations will also include two letters identifying their Canton. Abbreviations of the Cantons are as follows: AG, AI, AR, BE, BL, BS, FR, GE, GL, GR, JU, LU, NE, NW, OW, SG, SH, SO, SZ, TG, TI, UR, VD, VS, ZG, ZH.

Scoring: Each HB contact is worth 3 points. The sum of Cantons worked on each band is your multiplier (a possible total of 26 on each band).

Final Score: Total QSO points multiplied by the sum of Cantons worked on each band.

Awards: Certificates to the top scorers in each country and each USA and Canadian call area.

Indicate a Canton in a separate column for each band the first time it is worked. Check your log for duplicate contacts and include a summary sheet showing the scoring and your name and address in block letters. The usual signed declaration is also requested.

Mail your log within 30 days to: USKA Traffic Manager, Walter Schmutz, Gantrischweg 1, CH-3114 Oberwichtrach, Switzerland.

Applications in the form of QSL cards for the Helvetia Award go to: Max Bindschedler, HB9MX, Strahleggweg 28, CH-8400 Winterthur, Switzerland.

Only five entries were received from North America last year, probably due to very poor propagation: VE1AIH 2184 points, VO1AW 960, KA2DYB 105, W4YN 90, and WA3JXW 3.

Florida QSO Party

May 3, 1400Z–1900Z Saturday
May 4, 0001–0500 & 1500–2300 Sunday

This is the 20th annual QSO Party sponsored by *Florida Skip*. The same station may be worked on each band and on each mode. Phone and CW are separate contests and require separate logs. FL stations may work other FL stations, but for QSO points only.

Fla. stations are divided into two classes. Class A—Portables and mobiles operating outside own county using emergency power of 100 watts or less output. Class B—All other single and multi-operator stations.

Exchange: RS(T) and QTH. County for FL; state, VE province, or country for others.

Scoring: *For Florida*—One point per QSO. Multiply total by sum of states (49), VE provinces (12), and DX countries (maximum of 27) worked (maximum multiplier of 88). Class A stations multiply total score by 1.5 factor.

Out-of-state—Two points for each FL contact. Multiply total by FL counties worked (maximum of 67).

Frequencies: CW—3555, 7055, 14055, 21055, 28055. SSB—3945, 7279, 14279, 21379, 28579. (Also 160 and 2 meters.)

Awards: Certificates, both phone and CW, to the top single operator score in each state, province, and DX country, and each FL county. There are five plaques as follows: to the top single operator in FL and out-of-state, both on CW and SSB, and to the FL club with the highest aggregate score.

There is the usual disqualification clause for taking credit for excessive duplicate contacts and multipliers and other infractions.

Include a summary sheet showing the scoring and all essential information, include a dupe sheet for entries with 200 or more contacts, and the usual signed declaration.

A large SASE will get you sample log forms. Mailing deadline for all entries is June 6th to: Florida Skip Contest Committee, c/o North Florida ARA, P.O. Box 9673, Jacksonville, FL 32208.

County Hunters SSB Contest

0001Z Sat. to 2400Z Sun., May 3–4
(Off: 0800 to 1200 each day)

This is the 15th annual contest sponsored by the Mobile Amateur Radio Awards Club to increase activity for the County Awards program. The two four-hour rest periods are mandatory.

Emphasis is on mobile operation. Fixed stations may work other fixed stations, but only once regardless of the band. Mobiles may be worked from each county or band change. Mobiles contacted on a county line count as one QSO but two multipliers. QSOs made on a Net frequency do not count.

Exchange: Signal report, county, and state; country for DX stations. (Mixed-mode contacts are permitted providing one station is on SSB.)

Points: Contacts with a fixed W/K, 1 point (including KH6/KL7). W/K contacts with VEs, 3 points. W/K contacts with DX, 5 points. Contacts with U.S. mobiles, 15 points. Contacts with U.S. mobile team, 30 points (both ops. participating).

Final Score: Total QSO points times total number of U.S. counties worked.

Frequencies: 3870–3890, 7225–7250, 14250–14285, 21360–21380, 28570–28600. Following spots considered "Mobile Windows": 3875, 7240, 14270 (plus or minus 5 kHz). Fixed stations must QSY after working a mobile.

Awards: Plaques to the first- and second-place U.S. mobile, top-scoring fixed U.S./Canadian, DX station, and Mobile Team. Certificates to the top 10 mobiles, and to the top scorers in each state, province, and DX stations.

It is suggested that you send a large SASE to WA5DTK for detailed rules and log forms. All entries must be received by June 4th and go to: Barry Brewer, WA5DTK, P.O. Box 65, Randolph AFB, TX 78148. Winners will be announced at the County Hunters Convention and in the MARAC Newsletter. (Include a large SASE for copy.)

Armadillo Run

SSB: May 3–4 CW: July 26–27
0000Z Saturday to 2359Z Sunday
(Rest Period 0800 to 1200Z)

The Texas DX Society is again sponsoring this popular activity. This year's "Run" is in commemoration of the Texas Sesquicentennial (150th year of statehood).

This promises to be the real "big" one, as their goal is to activate all 3076 U.S. counties, plus a newly created Armadillo County. The new county will be recognized from March 2 to December 31, not only for the two weekends of the run, but also available for the CQ USA-CA awards program.

You will note that the dates and times are the same as for the County Hunters' contests. The exchange and other features are also the same. Therefore, check the County Hunters announcement in this issue for the SSB weekend and the July issue for the CW.

There will be special Armadillo Run stations on between 1300 and 0100Z Saturday and Sunday activating their assigned counties on 20 and 40 meters.

Scoring is the same as the CHC contests with the following additions. Australian counties will also count as multipliers. Armadillo County, Texas counts 5 times QSO points. Armadillo County, South Australia counts 10 times QSO points. And any VK5 station counts 5 times QSO points. (Since 1986 is also the 150th anniversary for South Australia, they plan to run joint activities with the Texas Armadillo Run.)

There will be awards galore, more than can be covered in this edited announcement. I strongly advise you to send a large SASE to Tom Taormina, K5RC, 12610 Barbizon, Houston, TX 77089 for a copy of the *Armadillo Press* with all the details and a list of Regional Coordinators.

Logs go to: The Texas DX Society, 350 Magnolia Bend, New Caney, TX 77357 and must be received within one month after the contest date.

DARC "Corona" 10 Meter RTTY

1100Z to 1700Z Sun., May 4

This is the second of a series of four 10 Meter RTTY contests sponsored by DARC for 1986. The remaining two will take place September 6th, and November 2nd. Activity, of course, is on 10 meters only in that portion of the band used for RTTY.

Classes: Single operator, multi-operator, and SWL.

Exchange: RST, QSO no., and name. U.S. stations will also include their state.

Scoring: One point per QSO. Use the WAE and ARRL country list for your multiplier. In addition, U.S. states, VE/VO, and VK call areas will be considered as separate multipliers. (See Aug. *CQ* for WAE list.)

Final Score: Total QSO points times the country and call area multiplier.

Awards: To leading station in each classification.

It is recommended that you use official log forms, which can be obtained from DE8BUS. Include an SASE with your request. You can also make up your own and include a summary sheet with detailed information.

Entries should be received within 30 days after the end of the contest and go to: Heinz Moestl, DE8BUS, P.O. Box 1123, D-6473 Gedern 1, West Germany.

A brief and quick review of our 160 CW Contest last January. Propagation-wise conditions were very good to excellent, and we are going to see some fantastic scores when the results have finally been tabulated. The stateside "Big Guns" created their own pileups and were knocking off the DX by the scores. The rest of us had to dig for the DX in the stateside QRM.

I will not go into any details about some of the other happenings during the contest weekend. I will leave that for Don, N4IN, when he reports the final results.

73 for this time, Frank, W1WY

FCC NEWS

BILL GRENFELL, W4GF

EFFECTIVE 03/01/86, FCC AMENDED ITS PART 97 RULES TO IMPLEMENT THE FINAL ACTS OF THE 1979 WORLD ADMINISTRATIVE RADIO CONFERENCE REGARDING THE ALLOCATION AND USE OF FREQUENCY BANDS FOR THE AMATEUR RADIO SERVICE. The PR Docket No.85-23 Order takes over 12 pages to describe what was done and why, and 13 pages to show the amended text of rule sections 97.3 (Definitions), 97.7 (Frequency privileges), 97.61 (Authorized emissions), 97.67 (Maximum transmitting power), and 97.415 (Frequencies available for space operation). It is not practicable to reproduce the new and amended rule text herein. However, a few highlights follow. Added or altered bands are: 902-928 MHz including F8E emission; and 1240-1300 MHz. The new above-47-GHz allocation table is 47.0-47.2; 75.5-81.0; 119.98-120.02; 142-149; 241-250 GHz; and above 300 GHz. regarding the Section 97,67 power rule, FCC states: "We have editorially revised paragraphs (a) and (b)...to more accurately codify the provisions of 47 U.S.C. Section 324 which require that amateur stations use the minimum amount of power necessary to carry out the communication desired, and to eliminate any possible interpretation to the contrary." For those interested in more details, a copy of Order PR Docket No. 85-23 should be available from the Secretary, FCC, Washington, D.C. 20554. The 02/01/86 W5YI Report contains an "extremely capsulized version." QST can be expected to treat the Order in much greater detail, probably in the March issue.

ANTI-AMATEUR ANTENNA ORDINANCES WERE DEALT A BLOW IN A KENTUCKY APPEALS COURT DECISION WHICH WAS INFLUENCED BY FCC'S MEMORANDUM OPINION AND ORDER IN PRB-1. The court vacated a lower court decision and sent the case back for reconsideration, to fashion relief consistent with ZPRB-1. (ARRL Letter, 01/16/86). In its decision on the matter of federal preemption over home satellite dish antennas (Report and Order, Docket CC 85-87, 01/14/86), FCC stated "Discrimination between types of antennas governed by local regulations can no longer be tolerated...." As in PRB-1, "...the Commission did not place an outright ban on cities, states or other local governments from placing minimal restrictions onto such structures. "It did, however, say that such regulations must be uniform and applied equally to all antennas erected for any reason." (Westlink Report, 01/24/86).

AS MIGHT BE EXPECTED, THE PUBLIC DIGITAL RADIO SERVICE PROPOSED BY DONALD STONER (RM-5241) FOR THE 52-54 MHz PORTION OF THE AMATEUR 6 METER BAND IS OPPOSED BY THE ARRL. "The alleged need for such a service is presently satisfied by both the Amateur Radio Service and telephone modem computer services." "What the League most strongly objects to...is the proposed reallocation of half of the 6 meter band to the proposed service without any quantified need established therefore." (ARRL Letter, 01/16/86). "According to Stoner, amateur packet radio is not adequate. He says his PDRS offers significant improvements and that the growth would exceed that of amateur radio since no licensing is involved. It is also likely that many radio amateurs would utilize the network, as indicated by the public comments. This provides a unique opportunity to introduce the public to other exciting areas of amateur radio. (W5YI Report, 02/02/86).

IN RESPONSE TO A QUERY ABOUT RUMORS THAT BRAZIL HAD TERMINATED THEIR MUTUAL AMATEUR THIRD PARTY TRAFFIC AGREEMENT, FCC REPLIED: SINCE THE GOVERNMENT OF BRAZIL HAS NOT OFFICIALLY NOTIFIED THE UNITED STATES THAT THE AGREEMENT HAS BEEN TERMINATED, WE CONSIDER THAT IT REMAINS IN FORCE.

ON 01/13/86, FCC ADOPTED RULE AMENDMENTS WHICH PERMIT AMATEUR STATIONS TO BE OPERATED UNDER AUTOMATIC CONTROL WITHOUT THE CONTROL OPERATOR BEING PRESENT AT THE CONTROL POINT WHEN THE STATION IS TRANSMITTING. Amended Sections were 97.3(m)(3), 97.79(b), and 97.69(d). Added were 97.114 (b) (4) and new Section 97.80 "Operation under automatic control." 97.80(a) provides that "When under automatic control, devices must be installed and procedures must be implemented which will ensure compliance with the rules when the control operator is not present at the control point." 97.89(b) specifies that "No amateur station may be operated under automatic control while transmitting third-party traffic." The ARRL, which had filed the petition for automatic control, "...had made it clear that a major goal in the securing of automatic control privileges on all amateur frequencies above 30 MHz was the facilitation of data transfer, computer-to-computer communications and packet-switching systems -- the growth in popularity of which would likely hinge on amateurs being allowed to program their stations to automatically transmit and receive digital communications, verify receipt of messages and respond to inquiries." "Commenters had requested that high-speed digital operating modes, such as packet-switching and electronic mailboxes, be exempted form the requirement that the control operator supervise third-party traffic. "However, the FCC found that neither the speed with which the message is transmitted, nor the operating mode, justified any deviation form the rule requiring that the control operator of the amateur station be present at the control point whenever the station was engaging in third-party traffic. (ARRL Letter, 01/16/86).

A MAINE AMATEUR HAS APPEALED AN ADVERSE DECISION IN LOWER COURT, TO THE SUPREME COURT, TO OVERTURN FCC'S AMENDMENT OF AMATEUR RULE SECTION 97.67 (f) WHICH REQUIRES FULL-CARRIER "AM" STATIONS TO COMPLY WITH THE 1500 WATTS PEAK ENVELOPE POWER OUTPUT LIMIT BY JUNE 1, 1990! (See previous report in FCC NEWS three months ago). The amateur claimed in a 12/18/85 press release that the Supreme Court has agreed to hear argument and make a decision on it. An FCC official advised that "He has until March to file his petition requesting the Supreme court to take the case." The press release "...is not entirely accurate. The case has not been accepted by the Supreme Court for argument." (W5YI Report)

FCC'S PRIVATE RADIO BUREAU IS CONCERNED WITH PRIVATE LAND MOBILE RADIOS THAT CAN BE EXTERNALLY PROGRAMED BY THE USER. Such users could transmit off their FCC-licensed frequencies causing disruptive interference to other users. A land mobile trade paper report on this subject mentions that "programmable citizens band and amateur radios" may be included in the "issues" concerning externally programmable radios. (RCR, 12/15/85)

THE 14 DAY SUSPENSION OF THE GENERAL RADIOTELEPHONE LICENSE OF AMATEUR LICENSEE WB8KWA WAS IMPOSED BECAUSE OF ALLEGED "WILLFUL AND MALICIOUS INTERFERENCE" TO OPERATIONS OF A LOCAL DETROIT AMATEUR REPEATER. The FCC said that the Communications Act "authorizes the Commission to deprive a licensee of operating authority for violations of any of the Commission's Rule, even those governing a different radio service." (W5YI Report, 02/01/86)

"...THE SIGNS ARE ALL THERE THAT THE FCC WILL BE GETTING OUT OF THE LICENSING BUSINESS AS WELL...AS GETTING OUT OF THE AMATEUR TESTING BUSINESS" PREDICTS FRED MAIA, EDITOR OF THE W5YI REPORT IN THE 02/01/86 ISSUE. He points to the drive to reduce Federal spending as a force on FCC to do it. "...for a fee all amateur licensing (not just "special call signs") could be handled by the private sector within a couple of years." (W5YI Report, 02/01/86)

FCC HAS RELEASED THE NEW ADVANCED AND EXTRA CLASS LICENSE EXAMINATION QUESTIONS VIA THEIR JANUARY, 1986 PR BULLETIN 1035C. Unfortunately, the small print and the heavy ink makes it a difficult guessing-game to determine what some of the words really are!

TELEPHONY OPERATION IN THE CARIBBEAN INSULAR AREAS BETWEEN 7075 AND 7100 kHz WAS PROVIDED BY FCC'S REPORT AND ORDER IN PR DOCKET 85-104, ADOPTED 1/16/86, EFFECTIVE 02/28/86. Section 97.61(b)(1) now reads: "The use of emissions A3W, F3E and G3E in this band is limited to amateur radio stations located in Regions 1 and 3, and amateur radio stations located in Region 2 which are west of 130 degrees West longitude, or South of 20 degrees North latitude." Some concluding remarks by FCC in the Order were: "It appears that amateur stations which transmit on 40 meters are experiencing increasing interference from broadcast stations in ITU Regions 1 and 3. However, this interference is not unique to the Caribbean and would not alone warrant a rule change. We take this action because we believe it will significantly improve international communication in the Caribbean without creating additional interference to amateur operation in the continental United States." (W4GF)

NEW PRODUCTS

Winner's Edge Software of Reston, Virginia has recently unveiled a fully-integrated real-time contest program for the Commodore 64 or 128 called The Contester II. It is capable of storing over 2000 QSO's on an all band basis or 1000 QSOs per band on as many as 6 bands. This program with Basic Module permits operation in any contest, while optional Contest Modules provide additional functions tailored to specific contests. The contester II maintains multiplier check lists, dupe sheets and the contest log. It maintains running score, multiplier tallies and other statistics to assist the operator in planning contest strategy.

The ARRL DX Contest Module is available now, and modules for the ARRL SS and CQ WW DX contest will be available by early summer. Additional contest modules will be introduced as contester interest warrants.

Up to 15 pre-programmed messages can be sent with single keystroke commands. The Contester is capable of auto serial number generation as well as auto date and time update. For more information or to order the $39.95 software package write to: Winner's Edge software, 2003 Sarazen Place, Reston, Va. 22091.

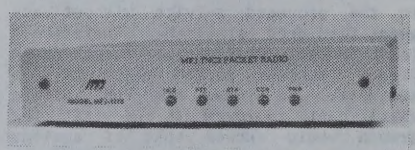
RADIO STATION TREASURY

For those interested in the early days of wireless and radio, including the evolution from the dawn of spark transmission, through the Golden Years of radio broadcasting, "Radio Station Treasury (1900 to 1946)" by Tom Kneitel, K2AES, should prove interesting reading. The 176 page book covers fascinating features and facts about stations in every nation and category, of every size and type through the use of faithfully reproduced rare archives which also include the ads for SWL receivers, antennas, and accessories available in the 1920's and 1930's. This exciting new book goes on sale April 2, 1986. It is available from CRB Research, P.O. Box 56, Commack, N.Y. 11725 for $12.95 (plus $1 postage).

MUF.BAS PROGRAM

For those that are interested in predicting the MUF and have IBM PC or compatible computers, Tony Gargano, N2SS, has developed a propagation prediction program called MUF.BAS. It utilizes the Solar Flux numbers, that are broadcast by WWV, to generate MUF predictions for a 24 hour period and displays the results either graphically or in tabular form. The program will calculate the MUF between any two locations, one of which can be selected from a look-up table or manually entered. The program is being distributed under the Shareware concept (if the program is of value to the user a $20.00 contribution is requested) and consists or 3 files: MUF.BAS the program file, MUF.DOC a nine page detailed documentation file, and README.MUF which instructs the uninitiated on how to print the documentation file. It is currently available on several bulletin boards including the N7BIT BBS.

AFFORDABLE PACKET RADIO CONTROLLER



MFJ ENTERPRISES, INC. of Starkville, MS announces the release of their affordable packet radio controller.

At $129.95, the MFJ-1270 breaks a price barrier to make packet radio affordable by bringing together efficient manufacturing and TAPR'S (Tucson Amateur Packet Radio) leading edge technology.

The MFJ-1270 is a nearly identical clone of the widely acclaimed TAPR TNC 2 with identical software and hardware. It's in a new cabinet and includes a TTL serial port for extra versatility.

It's totally general purpose. All that's needed to operated packet radio is a rig and any home computer with a RS-232 serial port and a terminal program.

For Commodore 64, 128 or VIC-20 users, there's an optional Starter Pack for $19.95. It puts them on the air immediately and includes interfacing cable, terminal software on tape or disk and complete instructions...everything the users need to get on packet radio. The MFJ-1282 is the disk version and the MFJ-1283 is the tape version. Both are priced at $19.95 each.

Unlike machine specific TNC's, the general purpose MFJ-1270 never becomes obsolete because the user changes computer or because packet radio standards change. The MFJ-1270 can be used with any computer that has an RS-232 serial port and an appropriate terminal program. If packet radio standards change, software updates will be made available as TAPR releases them. Also speeds in excess of 56K bauds are possible with a suitable external modem! These faster speeds would be very difficult if not impossible with a machine specific TNC or one without hardware HDLC. Also MFJ-1270 can be used as an inexpensive digipeater.

SOFTWARE FEATURES: Uses latest AX.25 Version 2.0. Use as few as 3 commands to make contacts. MHEARD command list stations and time heard. Up to 4 station roundtables. Date/time stamp of connections. Connection checking. User definable message for auto responses. 82 software commands.

HARDWARE FEATURES: Hardware HDLC for full duplex. Z80A CPU. 16K EPROM, expandable to 32K. 16K RAM. True data carrier detect. Use up to 9600 baud terminals. Battery backed-up RAM. Counter and software for self-calibration. Tuning indicator port for HF and satellite operation. LED's indicate connection, packet tone received, packet acknowledgment, power on, and transmitter activated.

The MFJ-1270 Packet Radio TNC 2 and MFJ-1282/MFJ-1283 Starter Packs come with a double guarantee. They can be ordered from MFJ for a 30 day trial period. If they don't satisfy your needs, return it for a full refund, less shipping. If you keep them you can be assured of continued service with MFJ's Full One Year Unconditional Guarantee.

To order or for additional information call toll-free 800-647-1800 or write to MFJ ENTERPRISES, INC., P.O. Box 494, Mississippi State, MS 39762.

ARRL DX TEST PROGRAM

Description:

This is a series of BASIC programs and data files for use during and/or after working the ARRLDX contest.

Equipment requirements are: Heath-Zenith Z100 or IBM-PC or PC compatible computer with two disk drives, printer and at least 192K of memory.

There are three .BAS programs and one DXCC data file. These work together and perform the following tasks:

1. Enter log data into data file. Entry is speeded to cut down on key-strokes by entering repeated data when possible.

2. Correct entered data if necessary.

3. Print dupesheets for any band at any time during log entry. These can be used by the operator to prevent working dupes.

4. Print logs and tabulate score. A print out suitable for submission is printed. Duplicate contacts are shown with no score and marked as duplicates. A summary sheet is printed after the logs.

Logs and contest data are written on a disk in drive B: This disk can be saved and another disk used for the next contest.

If logs are printed and errors noted the logs can be edited and printed again.

Programs are public domain. Duplication is permitted.

Available to Licensed Amateur Radio Operators for $10.00. Cost is for distribution only. We assume no liability for the use of the software.

Alan Harp, K4PB, 8113 Belgium Dr., Raleigh, NC 27606

Dear Yuri,

here is my check for another year of *RADIOSPORTING*. I have enjoyed every issue so far and expect to have as much fun reading future issues. I particularly enjoy DX NEWS and "Bloomin Zipper Flipper" propagation reports - both of which help me budget my operating time and decide when and where to point my beam (or phased verticals)! The idea of including a section on 160 m was a good move! It's a fun band which I plan to explore further and the articles in your magazine contain valuable information for such endeavors. Of course the CONTEST RULES and QSL INFORMATION sections are essential and worthwhile. Best wishes for continued success! ——————— Jim, K7DXD

Dear Sirs,

I have been receiving *RADIOSPORTING* ever since the first complimentary issue was sent over a year ago and I must say that I very much enjoy the magazine. I'm an avid DXer and enjoy contesting as well and your magazine covers my interest better than any other periodical.

——————— Lynn Pendleton, K4NYV

Dear OM,

What a pleasure to receive the unsolicited copy of *RADIOSPORTING*. I have seen it mentioned in a DX column somewhere, but had no idea how well done it was. I read it cover to cover the day I received it. I'm very pleased to have found a magazine devoted entirely to my favorite activities - DXing and contesting. I look forward to many more issues. My subscription check is enclosed.

Keep up good work! —— 73, Ron, K9AGL

Yuri:

Great magazine and getting better. Only problem is your propagation "forecast" is always a month behind. I don't keep track of past propagation so I'd like to see a forecast for the upcoming month.

I'd like to see more articles on contesting hints, like paperwork, how is it organized for minimum shuffling and hand movement? Station layout? Antennas for certain contest (WW and stateside), what antennas are widely used?

I like what you are striving for in amateur radio. I wish you all the best of luck in the upcoming years.

Best 73, Barry Martz, KI8W

Dear Barry,

This is an old problem with propagation forecast. One reason why we publish the historical data from the previous month is to give you a tool to make your own prediction. Just add 28 or 56 days to the diagrams we publish, and you will have the best forecast you can get. It will be about 80 percent true, which is better than anything else available. This, combined with listening to WWV for the latest figures, should give you an idea as to how the bands rate on the scale of: rotten, so-so, good, excellent.

I had an article on efficient logging and duping (manual) in the December, 1984 issue. It is probably the most efficient method around. It takes only three sheets of 8.5 by 11 paper to dupe over 4000 QSOs on one band. We will have more articles on efficient operating, equipment, antenna selection and use. That's what we are all about. Please stay tuned. ——————— 73, Yuri

Dear Yuri,

Thanks for putting out the best amateur magazine ever! I currently subscribe to 7 different amateur publications and *RADIOSPORTING* is by far the most looked journal to. Your magazine with all its contributing editors make *RADIOSPORTING* worth reading cover to cover. I particularly enjoy seeing pictures of well known DXers and contesters at their stations. I always like to see new ideas.

I have operated in contests but never full force. You have really spurned the contest drive in me. Finally, after eleven years of thinking about it, I decided to go for it. Just put up a new antenna system for DXing and contesting. The antenna is a KLM KT34XA at 80 feet and I hope to give it my best shot. See you in the pileups!

R.B., WB4FNH

Dear R.B.

Thank you for your kind comments. I didn't think we are "up there" yet, although we are trying hard, with still limited resources, lots of enthusiasm and hard work. We hope that advertisers will "discover" us too and help to propel us to a higher level achievement.

There is a lot of fun in the sports side of amateur radio and contesting. This is what keeps me going and actively involved. Please tell others about us and especially the advertisers! Thanks!

——————— 73, Yuri

Dear Yuri,

I am using my off time from the ARRL DX Contest to write you about a very serious matter.

I have just learned that you have rescheduled the IRSA WRC contest to October 4 and 5 of 1986.

This is a serious conflict with the premier QSO party in the United States, the California QSO Party. It has traditionally been held on the first weekend of October for many many years.

The top operators in the California QSO Party routinely make 1500 QSOs or more and the top out of state participants routinely make over 400 contacts! The QRM level easily meets that of other major contests including the ARRL DX Contest occurring as I write this!

Obviously a major problem is going to exist if the IRSA Contest takes place that weekend! I urge you to reschedule the IRSA contest! There are other winter weekends without major contests scheduled that would work nicely.

I have asked other Southern California Contest Club members and also Northern California Contest Club members to contact you with this same request.

If you would like help coordinating the IRSA contest, the SCCC, and I am sure the NCCC, stand ready to offer input.

Respectfully, Dennis Younker, NE6I,
SCCC Member Board of Directors

Dear Dennis,

Thank you for your letter and bringing up the problem with scheduling of our WRC contest. I also had a phone call from Ron, N6AUV.

We came up with the WRC contest and its rules as an answer to many complaints and requests that contesters around the world had with existing world wide contests. The scoring system in existing contests does not reflect the need for fair evaluation of the contester's skills around the world. Our rules allow this and they were very well received and praised by many.

In order for the contest to be fair for all of us around the globe from the scoring and propagation point of view, we wanted to have it around the equinox, when day/night time is the same on both hemispheres. This gives us a decent propagation without being penalized as CQ WW CW gets for being so late in the winter. Originally we thought to vacate one weekend of CAN-AM and planned WRC for the last weekend of September. Scandinavians rightly objected saying that their SAC contest is a quite popular, world-wide type contest and requested the change. The next closest weekend seemed the first one in October. Not wanting to get too close to CQ WW or to collide with any other world wide type of contest, we picked this one. I never participated in the CAL QSO party, and therefore have not realized the size of it.

It seems we have a problem. I asked

many times for the representatives from the major clubs to be on our board of directors. None came forward from W6 land. We are trying to establish a decent contest for all of us around the globe. I would like to work out some kind of solution. I'm not sure we can make another change in the date this year, The announcements went out, it is included in the calendars, etc. I would like to see the WRC contest on that weekend, because of the propagation around this time of the year and importance of the contest for all of us.

If it is at all possible, could the CAL QSO party be moved one week ahead? We are willing to vacate that weekend with CAN-AM and combine our phone and CW parts on one weekend, one week earlier. There shouldn't be any collision with SAC, because of the character of both contests.

There is almost always some contest on every weekend and it is impossible to avoid collision. I think we all need a decent world wide type of contest. The big guns and little pistols would be eternally grateful if we could work this out. We have the support of some prominent hams and we expect the WRC contest to become the true world championship, producing champions without handicap of being on "one point continent" or not being able to work their own country. We would like to fine tune the rules over the first two - three years and we are looking for input especially from the experienced contesters.

Please bring this up with your organizers. I hope we can work things out.

73 Yuri, VE3BMV

Dear Yuri,

My present subscription came about because of the incorporation of N7CKD's West Coast 160 Bulletin. I had not subscribed to *RADIOSPORTING* before because I am not very much interested in world record high scores for this and that contest, and my main interest in a magazine is in technical content and in 160 meters.

Recent issues have been very interesting in both of these aspects, so I'll give it a try for another year.

I may as well take a few minutes to mention what I like and don't like about the magazine.

I like:

The independent but non-aggressive attitude.

The recent emphasis on low band operation. Particularly the 160 meter columns.

The statistical information on the previous month's propagation reports (though it seems to me the K-index is superfluous because the K changes through the day, and the A-index summarizes the K trends anyway).

I don't like:

The long replies from the editor in "mail room."

The smallness of the typeface.

The reprinting of the pages I already see in CQ Magazine.

The absence of advertising (I don't see how you can be out of the red without it).

Bob Eldridge, VE7BS

Dear Bob,

Welcome aboard and I hope you find that we are improving (and learning fast.) Thanks for your comments. We appreciate them and use them to improve our magazine. I'll be short: The better typeface is in the works. We have the program. It is just a matter of configuring our printer for the new program. We need about two days to do that. Soon we will have a laser printer so the quality and contrast will be substantial.

Yes, we do have some reprints from other publications. We do this in order to bring you the material which is related to contesting and DXing, as well as to bring out the best from other smaller bulletins. We hope that the ratio of the original material will keep growing as more readers and authors discover how fast we get our material out.

As far as advertising goes, the next time you go to a store to buy a piece of equipment, tell them: "I didn't see you advertised in *RADIOSPORTING*!"

73, Yuri

AFRICAN NOTES

Sam Ford, ZS6BRZ

My input for last month's column was rather scanty and padded. On the weekend of January 25th I went down to Botswana to visit a friend, with the specific intention of calling on the Telecommunications authorities to inquire about an operating license. As a visitor to the country and a fully licensed amateur, I was accorded a reciprocal license provided I handed in my license for the duration of my stay, which I had as I was traveling as a mobile station. Further inquiries revealed that I could operate a Contest Station in the country for the weekend of March 29th and 30th in the CQ WPX Contest! I immediately filed my application for the guest license and was advised that I had to inform the Botswana Amateur Radio Society (B.A.R.S.) of my intentions in order to obtain their approval and sanction. This was merely a matter of courtesy and formality which I have done since. At present I am awaiting their (B.A.R.S.) confirmation. The other requirements of the Licensing Authorities was that I furnish the fixed address form where I was to operate and to submit two recent photographs. Through the magic of modern instant photographs this was dully complied with and the address was that of my old friend and prominent local businessman, Reg Loo.

As I surveyed the lay of the QTH, I found a floodlight lamp post from which I could mount the rotatable tribander although this is only about 10 meters high. From other well placed floodlight posts I reason that I could hang an inverted vee for 80 m and possibly a delta loop for 40 m. 160 m could prove to be a problem as there is not much room for a sloper and a vertical is out of the question, or is it? I am working on several ideas for the 160 m antenna but that will only be formulated towards the time of the Contest. The rest will be determined once I return to the site for the final preparations, which I hope will be Thursday afternoon, March 27th or Friday morning the 28th. The call will be A25/ZS6BRZ. There is a possibility that OM Graham, 3D6BQ, will join me in which case we will be running a multi-single again but this is dependent on whether the Licensing Authorities, the Botswana Telecommunication Corporation, will permit multi-operators using a single call sign. If not, then I will be on my own.

On the weekend when I was in Botswana I called on Lloyd and Iris at the nearby Oasis Hotel and found Lloyd working CW on 15 m. It was going on for their third week in A2 and they had worked some 115 countries and nearly 10,000 contacts. We sent a good few hours chatting and Lloyd expressed disappointment that he was unable to obtain a visa to visit Mozambique although he realized that he would not be able to get a license for C9. From Botswana they will be going to Zimbabwe, thence to Malawi, and with a wink in his eye, hopefully to 9J country. When I spoke to them they had no information as to what their call in Z2 will be. In Malawi they will call on Les, 7Q7LW, to see if they can be permitted to operate. Meanwhile, we have nothing solid to go by. They left for Zimbabwe on February 3rd but as yet I have not heard any pileups from them or their callsign, nor have I made any skeds with them. I will keep you posted.

In the last week, D2BCW was heard around 2030Z on 14.195 working at a reasonable pace. He spoke Portuguese to a local ZS but it could not be determined if he is legitimate. Manuel's QSL address is P.O. Box 66, Luanda, Angola. In Art's DX column the address was given as P.O.Box 63 which is a discrepancy. Alain, XT2BR, and his friend XT2BS have been working 20 kHz apart on 20 m around the same time on 14.198. Down at 14.173 Matt, C53FB and C53GD were having a party of their own. All these stations, apart from D2BCW, were rather weak to me and I assume that they were all pointed stateside.

That is all I have for you this month unless something else crops up. Very Best 73 and see you in the next letter!
Yours sincerely,

Sam P. Ford, ZS6BRZ

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1985 CAN-AM CONTEST RESULTS..... 2
VE3BMV RADIOTORIAL..... 3
DX NEWS, N2AU..... 4
NEWS, QSL ROUTES..... 7
TOP BAND NEWS, SLOPING ZL-SPECIAL, N7CKD..... 8
RECEIVING LOOP FOR 160, VK5KL..... 9
160 M BULLETIN, DJ8WL VERTICAL, LZ2CJ..... 11
K1MM/SV5 HOLIDAY IN RHODES, K1MEM..... 11
CLUB LIFE, VE3KZE..... 15
DXPEDITIONING, WB4ZNH..... 16
IRSA APPRECIATION AWARD - WB4ZNH..... 17
AN ANTENNA EXPERIMENT ON 160, KL7Y..... 18
CONTESTING AT PVRC, KC8C..... 20
HOW TO MAKE QSL MANAGER HAPPY, N6CW..... 22
WHAT EVER HAPPENED TO SWL? N9CUE..... 23
LOG DUPING ON THE APPLE COMPUTER, W3FG..... 24
WHEN WAS THE LAST TIME I...., W3XE..... 25
1985 CQ WPX VHF CONTEST RESULTS, WB2WIK..... 26
1985 WAE CW CONTEST RESULTS..... 27
TRAFFIC, EMERGENCY, K4ZN..... 28
HURRICANE ELENA, SOME VALUABLE LESSONS, WA4RGO 30
PROPAGATION REPORT, KH6BZF..... 31
CONTEST RULES, W1WY..... 32
FCC NEWS, W4GF..... 35
NEW PRODUCTS..... 36
MAIL ROOM..... 37
AFRICAN NOTES, ZS6BRZ..... 38
CLASSIFIED ADS..... 39

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1. To promote international friendship and goodwill through sportsmanship, radio contesting and DXing.

2. To improve the quality of amateur radio operators and operating through education and experience, by voicing the opinions of radio amateurs that are experienced and have contributed to the hobby.

3. To promote amateur radio contesting and other operating-related activities as a sport, and to provide the publicity and recognition that it deserves in the public media.

4. To publish timely articles in the monthly magazine "RADIOSPORTING" on various subjects of interest to Contesters, DXers, SWL, VHF, UHF and microwave enthusiasts, on RTTY, SSTV, computers in communications, fox hunting and anything of interest to the active ham striving for self-improvement. To feature technical articles on equipment design and modifications, antenna construction, radio-wave propagation, and commercial equipment reviews by qualified people.

5. To organize, as an annual event, the "International Contest Symposium," which runs parallel (evenings) with the Dayton Hamvention; to feature timely topics with the participation of some of the world's leading amateurs at the Syposium.

6. To hold an annual Awards Dinner with an entertainment program, where awards for various achievements will be presented.

7. To maintain and publish all time record tables for significant contests.

8. To sponsor and run an annual World Contest Championship, based on results of a number of major contests, with the annual "Contester of the Year" awards in various categories.

9. To administer the "Contest Hall of Fame" and vote on awarding membership to those who have significantly contributed to the sport of contesting.

10. To coordinate and assist in the scheduling of international contests.

11. To hold regular weekly meetings on air on 20 and 80 m. (14.200, 3.830)

12. To provide an automatic, computer controlled bulletin station that transmits the latest DX and Contest news on CW and RTTY.(14.098)

13. All in all, the IRSA is dedicated to the pursuit of excellence and quality in amateur radio by promoting, publicizing and leading the way.

14. Attractive numbered membership certificates and badges are issued to members.

15. IRSA is run by contesters who are selected for their accomplishments and it is independent of any national or commercial organizations.

16. IRSA will assist and sponsor Contests/DXpeditions, Trophies and other radio sporting and publicity events.

17. IRSA is a non profit organization, with all proceeds to be used to finance events and awards sponsored by IRSA and to cover expenses incured by Association.

18. IRSA members can display the IRSA logo on their QSL cards and correspondence; members agree to obey the Contester's Code of Ethics and to promote it.

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Canada	Bob Nash, VE3KZ
Radio Funnies	Mike Crabtree, AB0X
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Advertising, producth.	Sonya Blanarovich
Cartoonists	Eugene Radewych
	Dave Heil, K8MN

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